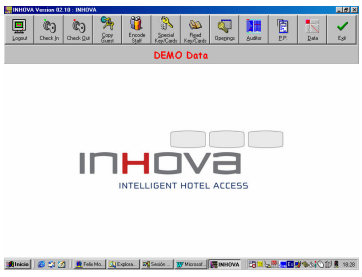
Technical manual. User manual



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1- INTRODUCTION

INHOVA is a system for the hotel access management. It is an access control system conceived and designed for hotel management.

It is a completely autonomous access control system, based on autonomous electronic locks, wall readers and safes with magnetic stripe card technology and autonomous electronic cylinders with contact chip technology. All these products have a non-volatile memory and a real-time watch and calendar. This allows restricting access according to time.

Apart from the products mentioned above, there is a management software that allows programming the closing plan of the installation and managing the installation. The closing plan of a hotel specifies which users are allowed to access to the doors of the installation and when.

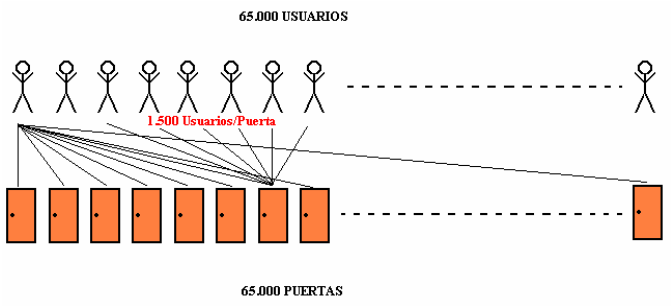
Once the closing plan is programmed in the management software of the system, we will start the installation by transmitting the information to the doors and recording the cards and/or keys for the system's users.

This manual explains in detail how to program the closing plan of the installation and how to start the installation.

2- CAPACITIES OF THE SYSTEM

In the cylinder and lock manuals we have seen their storage capacity. This capacity is the same in both cases. That is, both the cylinders and the locks can recognise up to 1,500 users and store up to the last 1,000 events in their memory.

However, the capacity of the INHOVA system is bigger, from the point of view of the software, as we can control and manage up to 65,000 users and 65,000 doors. A certain user will have access to up to 65,000 doors, but a maximum of 1,500 people will have access to each door.



When we transmit the data to the Portable Programmer, we will have to consider its capacity. For more information see the Manual of the Portable Programmer.

65,000 users
65,000 doors

Regarding to the number of events the system can store in its memory, there are no limits other than the memory limitations of the computer where we are executing and storing the INHOVA system.

3- TYPES OF INSTALLATION: MAGNETIC, PROXIMITY, CYLINDER AND MIXED

As we have already mentioned, the INHOVA system is based on autonomous electronic cylinders and electronic locks.

When speaking about electronic locks, we can use magnetic stripe technology, proximity technology or contact less chip technology or even a combination between those technologies in the same element. This is also available for wall readers and safes.

In addition to this, we can also combine the electronic cylinders with TX80 mechanical cylinders thanks to the INHOVA key (see the Manuals of the Cylinder and the INHOVA key). Therefore, when there are INHOVA cylinders installed, it is possible to install also TX80 mechanical cylinders.

Bearing all this in mind, we can have four types of INHOVA installations:

	INSTALLATION TYPE				
	MAGNETIC	**PROXIMITY**	**DUAL**	**CYLINDER**	**MIXED**
PRODUCTS	ELECTRONIC LOCKS WALL READERS SAFES ENERGY SAVERS MAGNETIC STRIPE CARDS PORTABLE PROGRAMMER CARD ENCODER AUTHORISATION KEY INHOVA SOFTWARE	PROXIMITY LOCKS WALL READERS SAFES ENERGY SAVERS CARRIERS (CARDS, BRACELETS, WATCHES and so on) ELECTRONIC PROXIMITY KEYS PROXIMITY ENCODER PORTABLE PROGRAMMER AUTHORISATION KEY INHOVA SOFTWARE	DUAL ELECTRONIC LOCKS DUAL WALL READERS KEYBOARD SAFES ENERGY SAVERS MAGNETIC STRIPE CARDS PROXIMITY CARRIERS PORTABLE PROGRAMMER CARD ENCODER PROXIMITY ENCODER AUTHORIZATION KEY INHOVA SOFTWARE	ELECTRONIC CYLINDERS MECHANICAL CYLINDERS ENERGY SAVERS NEUTRAL INHOVA KEYS (TS RIDGE) CUT INHOVA KEYS (XSE RIDGE) PORTABLE PROGRAMMER AUTHORISATION KEY INHOVA SOFTWARE	ELECTRONIC LOCKS PROXIMITY LOCKS WALL READERS SAFES ELECTRONIC CYLINDERS MECHANICAL CYLINDERS ENERGY SAVERS MAGNETIC STRIPE CARDS CARRIERS PROXIMITY ELECTRONIC LOCKS NEUTRAL INHOVA KEYS (TS RIDGE) CUT INHOVA KEYS (XSE RIDGE) PORTABLE PROGRAMMER CARD ENCODER PROXIMITY ENCODER AUTHORISATION KEY INHOVA SOFTWARE

Keep in mind that the magnetic stripe card technology and the proximity technology are not compatible with the contact-chip technology. In other words, with a contact-chip key it is not possible to open a magnetic stripe or proximity technology lock or wall reader.

This means that in a mixed installation (Eg: doors with electronic cylinders and/or magnetic stripe or proximity locks) where the user has access to both type of doors, it will be necessary to give him two credentials, a key and a card, in order to open the doors, so we will have to set the user both in the card and the key.

4- INHOVA INSTALLATION

As explained in the previous section, depending on the product we are using we can have different types of installations. In each installation we will have locks, readers, safes and electronic cylinders that we must install in the doors we want to control.

The common procedure in a hotel is to install autonomous electronic locks in the rooms and doors where customers do not have access, such as offices, storerooms, etc. In some hotels, however, the locks may not suit the doors, for instance if they are very old. In these cases electronic cylinders are the ideal solution.

Wall readers are ideal for access doors with some kind of automation, such as automatic doors, garage doors etc.

Safes can be installed in the hotel's rooms, so that customers can use them.

In addition to that, we have the system management devices: the management software, system the authorisation key, the portable programmer, the motorized encoder and the proximity encoder.

All the products are supplied by your distributor.

Your distributor will perform the following tasks:

- Installation of the locks, readers, cylinders and safes.
- Creation of the hotel's closing plan
- Initialisation of the locks, readers, cylinders and safes installed.
- Record of the user cards and/or keys.

Once this is done, the system will be in operation and ready to be managed.

The INHOVA system has two programs: one to create the closing plan, named INHOVADATA.exe, and another one to manage the system, named INHOVA.exe.

We will now see the difference between them.

4.1- INHOVADATA.EXE PROGRAM

INHOVADATA is the program we are going to use to design the hotel's closing plan and where we are going to create the system's users, the doors, the time zones etc. We are also going to determine which users will have access to which doors and when. In other words, we are going to create the matrix of the installation.

Once the closing plan is programmed, we will close the INHOVADATA program and execute INHOVA, which we will manage the installation with.

4.2- INHOVA.EXE PROGRAM

INHOVA is a program for installation management. With it we will record the cards and/or keys of the hotel's customers and the hotel staff (master cards/keys), and manage special cards and/or keys, the register of events, the auditor and the communications with the Portable Programmer.

Whenever we want to modify the closing plan, we must execute the INHOVADATA program again, make the necessary changes and return to the INHOVA program.

The system has two separate programs for security reasons. This prevents unauthorised operators of the system from changing the closing plan and altering the system's operation. In addition, separating the programs makes it easier to see and use the system's software.

5- STARTING THE INSTALLATION

Once we have installed the locks, readers, safes and/or electronic cylinders, we can create the hotel's closing plan and then transmit it to the doors.

You will receive, with the locks, the following management devices: the portable programmer and the encoder to record and/or read magnetic stripe cards, proximity cards and/or electronic cylinders.

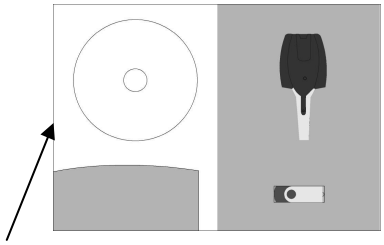
To create the closing plan we must install the software in the computer from which are going to manage the installation and follow some steps that we will explain later.

The hotel's closing plan will be carried out by the distributor and/or technician of Talleres de Escoriaza, S.A.U., who will go to the hotel for this purpose.

The distributor and/or technician of Talleres de Escoriaza, S.A.U. will give you a folder containing the authorisation key of that particular installation, the CD-ROM with the system's installation software, the technical manuals and a diskette of the hotel's closing plan, which contains the system code with which the authorisation key has been recorded.

5.1- INSTALLING THE SOFTWARE

Your distributor or the technical service of Talleres de Escoriaza, S.A.U. will give you a folder containing the CD-ROM with the installation disks of the INHOVA software, a memory stick with the closing plan of your hotel and the authorisation key (optional) with your hotel's system code.

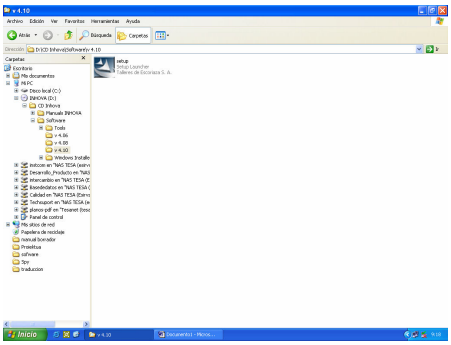


CD-ROM wih the installation setup.

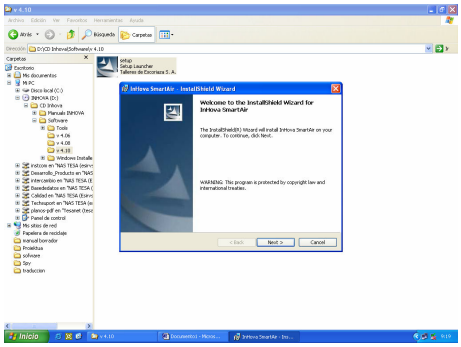
System technical handbooks are included in the CD-ROM

To install INHOVA software in any computer please follow the next steps.

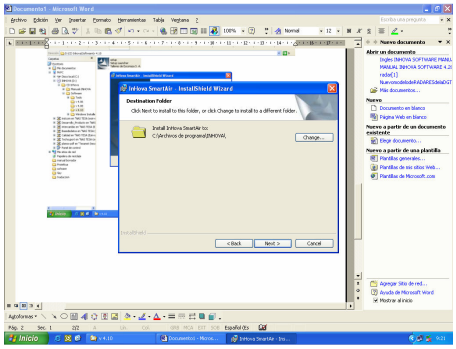
Insert the CD-ROM in the computer. Open Windows explorer from the Startup menu and go to unit D: of the CD-ROM. Open the folder that contains the last INHOVA software version in the CD-ROM and you will se the following screen:



Double click to execute the program and it will automatically start the installation of the INHOVA software on the computer.

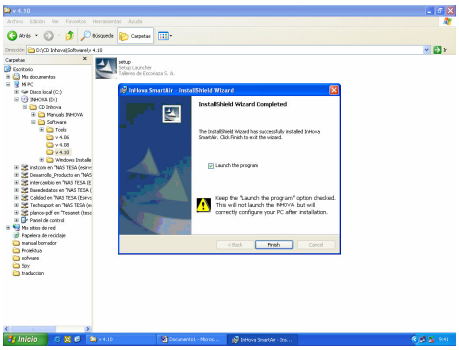


Select NEXT:

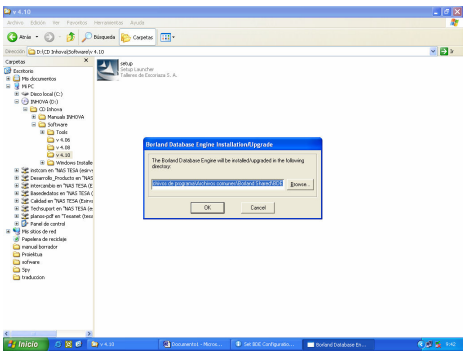


Select the location of the hard disk (C:) for the INHOVA program. The program will be installed in C:\Program Files\Inhova by default. In other words, it creates a folder called Inhova in the Program Files folder of the hard disk. If you want to install the INHOVA program in another location you will have to specify the new location by clicking on CHANGE.

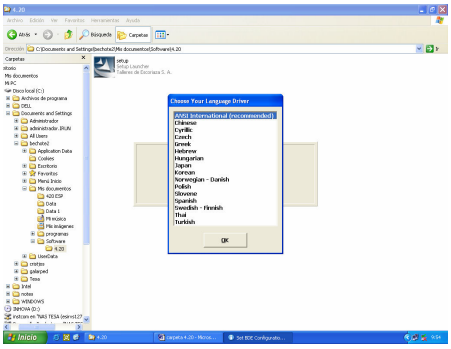
Select NEXT:



To finish the installation click on FINISH:



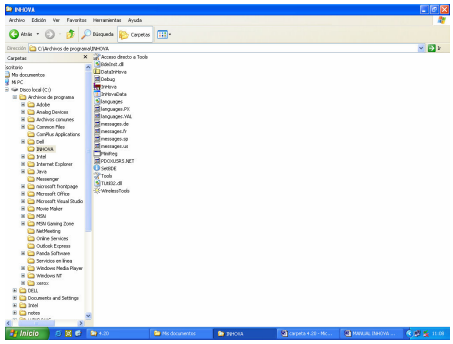
Select OK in the previous screen:



Select OK again in the previous screen:

With this the installation of the software is finished. Remove the CD-ROM from the computer. The INHOVA program is installed in the folder you have selected during the installation. By default, this folder is called INHOVA and is located in the Program Files folder of the local disk C:

Inside the folder you can find the execution files for INHOVADATA.exe and INHOVA.exe programs, as you can see in the following picture:

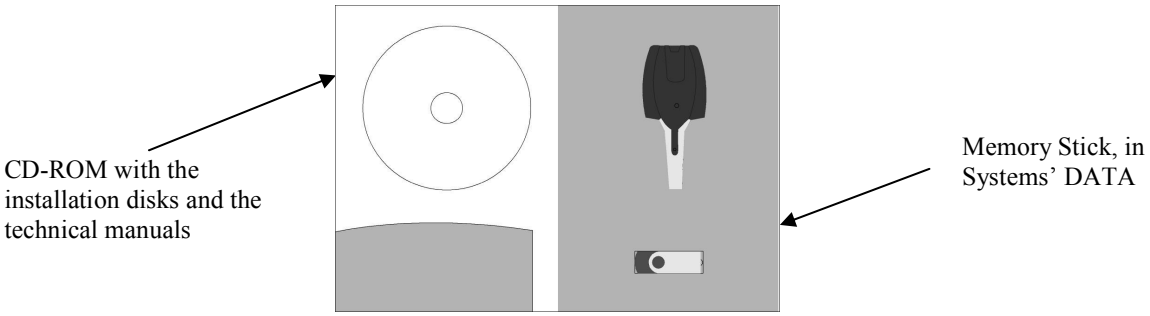


5.2- INSTALLING THE DATA FOLDER

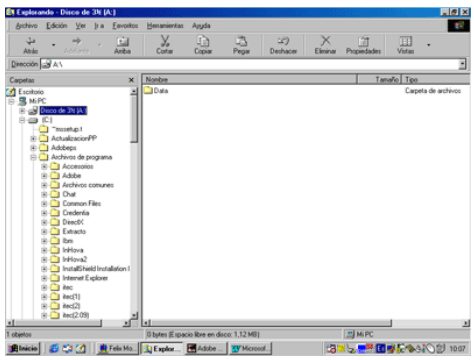
In the previous section we have seen how to install the software of the INHOVA system in the computer. Nevertheless, having installed the software does not mean that a closing plan has been created. We must create the closing plan of our hotel.

Each closing plan has a unique SYSTEM CODE. This means that each installation is different.

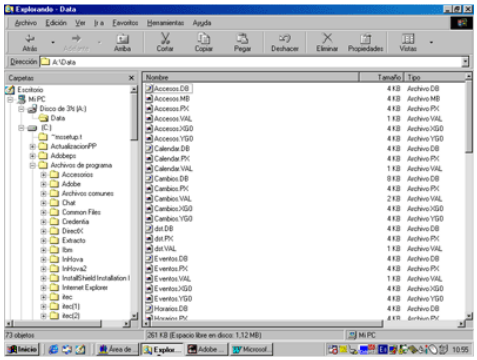
This system code is created by Talleres de Escoriaza, S.A.U. You can see it in the "Data" folder you will find in the memory stick included in the package of the Authorisation Key and the CD-ROM to install the software.



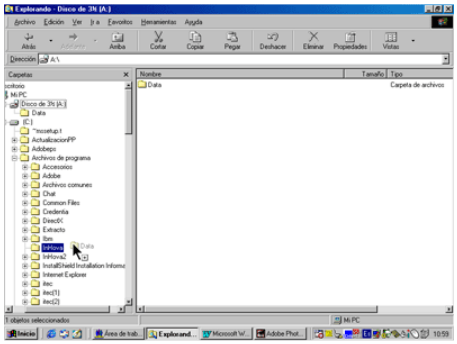
If we insert the memory stick in the USB port of the computer and open the drive with Windows explorer, we will see this Data folder:



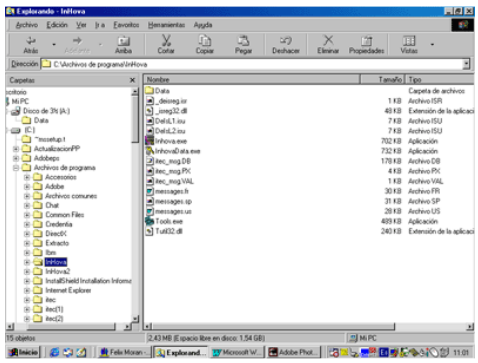
The Data folder contains all the files the database needs to store the information regarding your hotel: rooms, doors, users, register of openings, calendar, time zones, etc. When we want to make a back-up copy of our hotel's closing plan (which is recommended to do often), we will have to make a copy of the "Data" folder.



To execute the INHOVA program with the closing plan that has the system code of our hotel, we must copy the "Data" folder in the INHOVA folder where we have installed the execution files of the INHOVA program. To do this we must select the Data folder of the diskette with the mouse, and pressing the left button of the mouse drag it to the INHOVA folder.

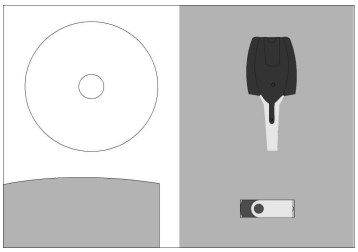


Therefore, in the INHOVA folder we will have the programs of the system and the Data folder with the files containing all the information about the installation.



5.3- AUTHORISATION KEY

The authorisation key of the system is the green key that you will find in the folder that includes the installation CD-ROM and the memory stick with the Data folder, in case that the customer orders specifically the authorisation key, otherwise, the folder will not include the authorisation key.



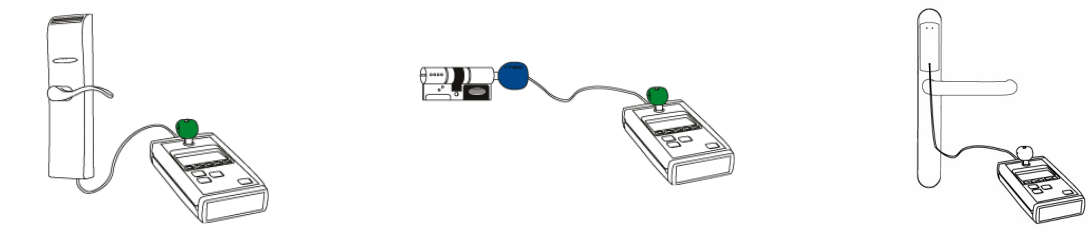
When the system requires the use of the authorisation key, nobody will be able to modify the closing plan of the locks, readers, safes and/or cylinders without using the authorisation key.

As we know, the locks, readers, safes and/or cylinders are autonomous products. That is, they are not directly connected to the computer that manages the installation.

The portable programmer acts as a transmitter of the information between the computer and the products and vice versa. As a result, when we want to transmit the information to the locks we will have to transmit that information from the computer to the portable programmer first, and then from the portable programmer to the locks.

When we connect the portable programmer to the locks to transmit the information:

"IF THE AUTHORISATION KEY OF THE INSTALLATION IS NOT INSERTED IN THE PORTABLE PROGRAMMER, WE WILL NOT BE ABLE TO PERFORM ANY OPERATION IN CASE THAT THE SYSTEM REQUIRES THE USE OF THE AUTHORISATION KEY".



If the system needs the use of the authorisation key, nobody will be able to transmit the information to the locks without the authorisation of the key. Obviously, the person responsible for the security of the installation must have the authorisation key.

To transmit new information to the locks, readers, safes and/or cylinders with the portable programmer, we must first transmit that information from the computer to the portable programmer.

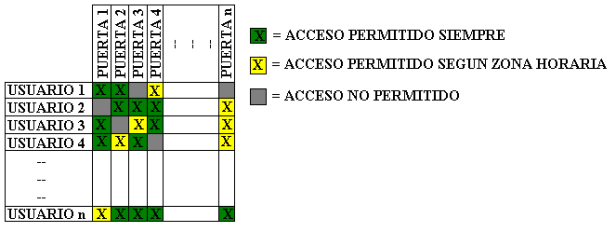
5.4- CREATING A CLOSING PLAN: GENERAL ASPECTS

Before explaining how to create a closing plan, we must explain the way in which the INHOVA system manages the system's users and doors.

In any closing plan of an access control system, we must define the users and doors we want to control before deciding which users will have access to the doors of the installation where the locks of the system are installed and when will they have access.

Once the users and doors have been defined, we will create the access time zones to that installation.

Then we will fill in a matrix to specify which doors each user will have access to and in which time zone. A user does not necessarily have to have the same time zone in all the doors s/he has access to; s/he can have a time zone for one door and another one for another door. We can see this in the illustration below:



ACCESS ALWAYS ALLOWED

ACCESS ALLOWED ACCORDING TO TIME ZONE

ACCESS NOT ALLOWED

Once we have created the matrix, the closing plan of the installation will be completed.

So far we have described a closing plan that suits any installation. However, INHOVA is a system for the management of hotel accesses. Therefore, we must bear this in mind when we define the users and doors.

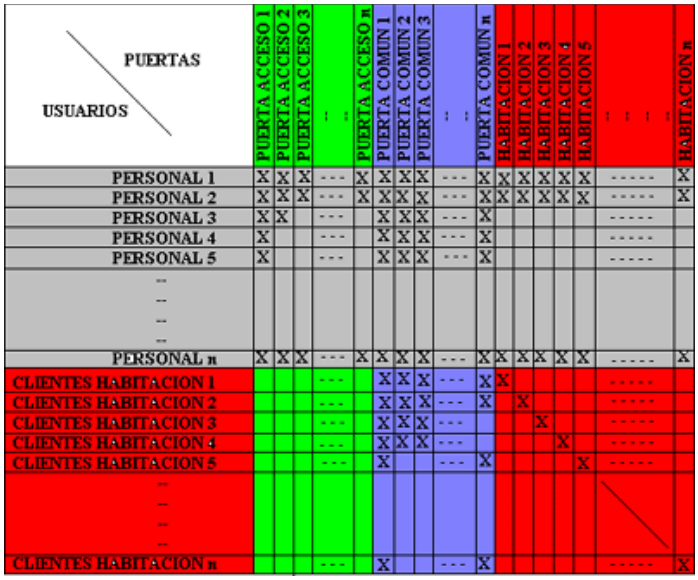
The first thing to take into account is that a hotel has two types of users: the customers (guests) and the staff (cleaning, maintenance, administration etc.). In the case of the customers and due to the features of a hotel, each customer will have a certain room and a variable number of days (the number of days s/he will stay at the hotel). This customer is always a different person. Therefore, when we define the customer in the installation, we must give her/him a generic name. The easiest way to define a customer is to indicate her/his room number. For instance: Customer in room 101, Customer in room 102, etc.

Customers will be managed in the following way: when a customer arrives at the hotel, we must give her/him a room and record the user card for that room. The room will not be given to any other customer while that customer is at the hotel. By default this card will expire on the day the customer leaves the hotel. The room will be free again from that day and we will be able to give it to another customer. When another customer arrives and we give her/him the room, we will record the same card that we had recorded for the previous customer, but the card will now have different activation and expiration dates. We will do this with all the customers and rooms of the hotel.

Obviously, the card that we record for the customer has only access to the room that customer has been given.

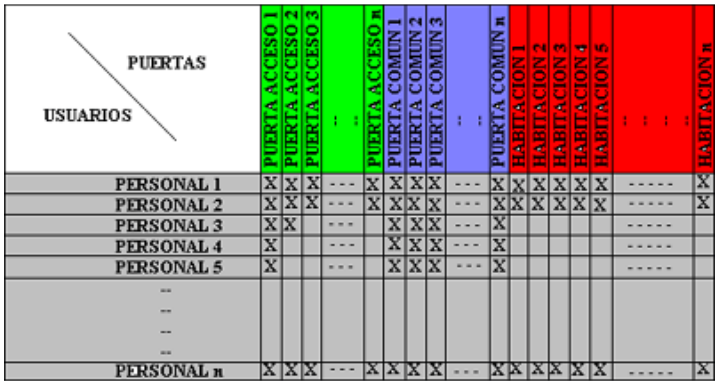
A hotel has different types doors: **room** doors, private doors or doors where customers do not have access, which we will call **access control** doors (storerooms, offices, kitchen etc.); finally, we have **common access** doors, to which both customers and staff will have access (garage, swimming pool, corridors etc.).

Bearing in mind the differences between users and doors, the matrix of the system will be similar to the following example:



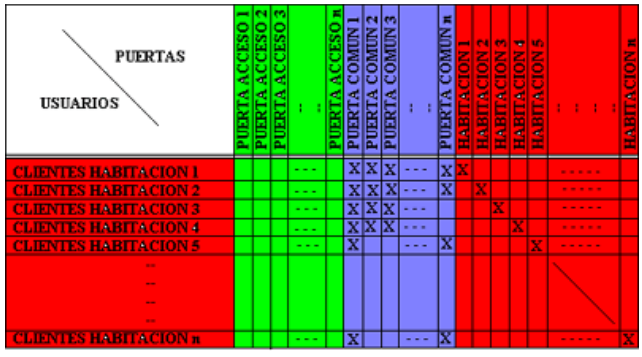
We can divide the matrix into two parts: one for the staff and one for the customers.

The part concerning the staff must be filled in like the matrix of any other closing plan. That is, for each user of the staff we will choose the doors s/he will have access to. In each of these doors, we will also specify whether the member of staff will have access always or according to the time zones previously created.



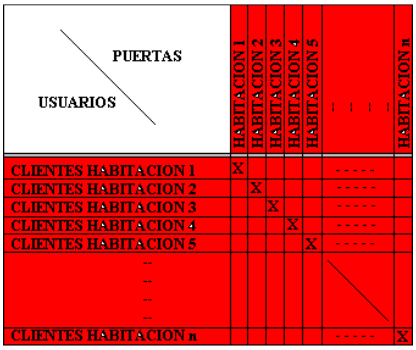
If we look at the part of the matrix concerning the customers, we will see that it is slightly different.

As we have already mentioned, the doors of a hotel can be “access control” doors (staff doors where customers cannot have access to), “common access” doors (doors that both staff and customers have access to) and “room doors”.



In this matrix, the part concerning the "access control" doors is ALWAYS blank. That is, customers will never have access to any of these doors. Therefore we need not to display this part of the matrix.

The part of the matrix concerning the "room doors" is also always the same, regardless of the hotel. This is because each customer only has access to the room s/he has been given. Therefore the matrix will always be a diagonal, as shown in the example below:



It is a constant matrix, and therefore we need not to display it.

Hence, the only part of the matrix regarding the customers that we must fill in is the one concerning common access doors:

In most cases, this part will be the smallest part of the matrix.

Bearing all this in mind and to make the management and the creation of the hotel closing plan easier, the INHOVA system acts in the following way:

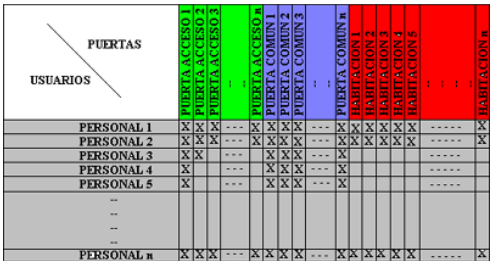
First we create the hotel's doors, indicating which type of door they are: room doors, access control doors or common access doors.

Every time we create a room, the system will automatically create a user for that room. However, we will not be able to see that user in the matrix of the installation.

When we create the common access doors (after creating the rooms), we will specify which customers will have access to them (this step replaces the part of the matrix concerning the customers and the common access doors). This process is explained later in this manual.

If we do this we will not have to display the part of the matrix concerning the hotel's customers. We will not either have to create those users of the system: when we create the rooms, a user will be created automatically for that room. Therefore the system is very simple.

Once we have created the doors (room doors, access control doors and common access doors) and defined which customers will have access to the common access doors, we will only have to define the hotel staff and fill in the part of the matrix concerning the staff:



PUERTAS / USUARIOS	PUERTA ACCESO 1	PUERTA ACCESO 2	PUERTA ACCESO 3	...	PUERTA ACCESO n	PUERTA COMÚN 1	PUERTA COMÚN 2	PUERTA COMÚN 3	...	PUERTA COMÚN n	HABITACIÓN 1	HABITACIÓN 2	HABITACIÓN 3	HABITACIÓN 4	HABITACIÓN 5	...	HABITACIÓN n
PERSONAL 1	X	X	X	---	X	X	X	X	---	X	X	X	X	X	X	-----	X
PERSONAL 2	X	X	X	---	X	X	X	X	---	X	X	X	X	X	X	-----	X
PERSONAL 3	X	X		---		X	X	X	---	X						-----	
PERSONAL 4	X			---		X	X	X	---	X						-----	
PERSONAL 5	X			---		X	X	X	---	X						-----	
...																	
PERSONAL n	X	X	X	---	X	X	X	X	---	X	X	X	X	X	X	-----	X

The closing plan of the hotel is completed. In the following sections we explain all the steps in detail.

5.5- CREATING A CLOSING PLAN FOR A MAGNETIC INSTALLATION: INHOVADATA.EXE PROGRAM

We have already explained that, depending on the product we install in the doors (magnetic stripe card electronic locks, contact less electronic locks or electronic cylinders), we can have four types of installations: MAGNETIC installations, that is, installations with magnetic stripe card technology, PROXIMITY, where we use products with proximity technology, DUAL, where we use products with dual technology (magnetic stripe and proximity), CYLINDER installations, in which we only use electronic cylinders, and MIXED installations, in which we use several technologies.

Next, you can see an explanation about the creation of a locking plan of MAGNETIC, PROXIMITY, DUAL, CYLINDER and MIXED type. The products we need for this are the following:

- DONNA lock
- DONNA SmartAir lock
- DONNA Dual SmartAir lock
- DONNA lock with keypad
- SPY SmartAir lock
- SPY SmartAir R/W lock
- SPY Design lock
- SPY Design R/W lock
- Electronic cylinders
- C+P Safe
- Keyboard safe

- SmartAir Safe
- Magnetic stripe wall reader
- Smartair wall reader
- Magnetic stripe wall reader with keypad
- SmartAir Dual wall reader
- Spy Design SmartAir wall reader
- Portable programmer
- Motorized encoder
- SmartAir encoder
- Single energy saver
- Magnetic stripe intelligent energy saver
- SmartAir intelligent energy saver
- C-tec energy saver
- INHOVA Software

When they are supplied by Talleres de Escoriaza, S.A.U., the electronic locks are in Initial State. Thanks to this we can install the locks without having to program them.

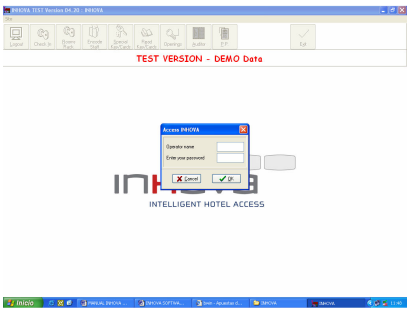
Once we have installed all the locks, readers and/or safes, we will create the hotel closing plan with the software of the INHOVA program; then we will program the locks.

5.5.1- Execution of the Program: User Name and Password

Once we have installed the INHOVA software and the Data folder containing the closing plan with the hotel's system code, we can execute the INHOVADATA program to create the hotel's closing plan.

We can execute the inhovadata.exe program by double clicking on it with Windows explorer or by double clicking on the program's direct access icon:

When we execute the program the software will ask us to enter an operator name and a password.



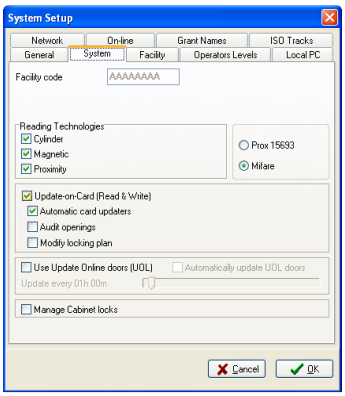
The distributor or technician from Talleres de Escoriaza, S.A.U. will give you that operator name and password. The system accepts as many operators as number of users are in the installation; there are different levels of access, and some operators will only be allowed to perform certain operations in the program.

Once we have entered the operator name and password, we will see the main screen of the INHOVADATA program, where we will program the hotel's closing plan:

5.5.2- Setup Menu

Before we start programming the closing plan by defining the users, doors, etc., we must "set up" our installation. That is, we must define aspects such as the language, the operator levels etc. To access the Setup Menu we must click on the Setup button of the main screen of INHOVA.

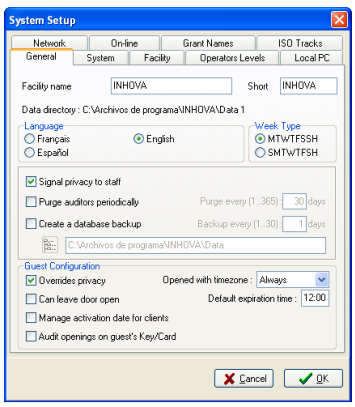
When we click on the "Setup" menu we will see the main screen of the Setup menu:



Once in the Setup menu, we will set up the installation by means of its different options.

5.5.2.1- General

In the "General" label of the Setup menu we will see the following fields: Name of the Installation, Short Name, Language and Type of Week. We will also configure the guest configuration options that the hotel's customers will have in their room. That is, whether they are going to overcome the privacy in the lock of the room, whether they will be able to open it manually, according to which time zone they will be able to open it, the expiration time of the card on the day the customers leave the hotel, and whether the customers´ cards will have activation dates. The screen is like the following:



The *Name of the Installation* is the name that appears in the main screen of INHOVA, above the task bar and behind the version of the program.

The *Short Name* is the name that identifies the closing plan of the installation in the Portable Programmer. This field is essential: since the screen of the Portable Programmer is too small, the name of the installation may not be fully displayed. This is why we use that "short" name.

The *Language* is the language in which we see the software and the messages of the portable programmer. To change it we must select it and then press OK button of the Setup menu.

In the *Type of Week* we specify whether we want the week to start on Monday (Europe) or Sunday (America).

The *Signal Privacy to staff* allows to the staff to know if the room is occupied or not before getting in. In the case that the staff inserts the card and the room door is bolted, green and red leds will blink reporting to the staff that the customer's room is occupied.

The auditor is a file which stores all the operators' operations in INHOVA or INHOVADATA system -see point 5.5.9-. Therefore, if we select the option *Purge Auditors periodically* we can avoid collecting to much information by configuring the number of days to purge the auditor file.

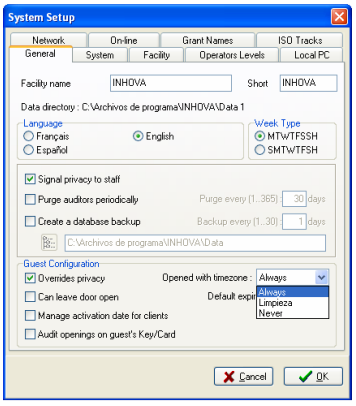
The system will make backup copies of the closing plan if we select the option *Create a Database Backup*, where we can define the location and the number of days to carry out the backup copy.

In the field ***Guest Configuration*** we have the following options:

Overrides privacy: if we select this option, all the hotel's customers will be able to overcome the privacy of the lock of their room. That is, if somebody is inside the room with the security lever of the lock bolted, the customer will be able to open the door by inserting the card in the lock: by overcoming the privacy with the handle, s/he will remove the bolt and the security lever. If the customer cannot overcome the privacy and there is somebody in the room with the lever bolted, s/he will not be able to open the door and the lock will show this with a flickering of the two warning LEDs.

The option *Can leave the door open* means that the customer can change the state of the door from Open to Normal or vice versa by inserting the card in the lock two consecutive times. That is, the customer will have the possibility of leaving the door open and closing it when s/he wishes. This option is not very common, as guests could leave the door open by mistake. With this mode anybody can enter the room without the lock registering the opening.

With the option "*Open according to time zone*" we can restrict the customers´ access to their rooms according to a time zone. All the customers must have the same time restriction in their rooms. To specify the time zone, we must first create that time zone in the Timetables menu of the INHOVADATA program. As we can see in the next screen, we only have two options: Always or Never. This is because we have not created any time zone yet; the program only shows the system's default time zones, that is, Always and Never.



Possibility to restrict customers´ access to their rooms according to time zones.

The *Default Expiration Time* shows us the time the customer's card will expire at on the day s/he checks out.

If we activate the option *Manage the activation date for clients*, we will manage the activation dates for the customers with the INHOVA program. That is: we can record a card for a customer that will arrive at the hotel after the day we record it, and this card will not operate until its activation date arrives. This option is very useful when a big group of people is going to arrive at the hotel at the same time, as we can record the cards before the arrival date. These cards will not operate until that date.

If the option *Audit openings on guest's key/card* is activated, the key or card of the client will record all the openings made by the user, as long as we use proximity locks or electronic cylinders.

5.5.2.2- Operator Levels

Your distributor will give you an operator name and a password to access the management software of INHOVA. This name and password can be replaced by others you can remember more easily. We can have as many operators as number of users are in the system.

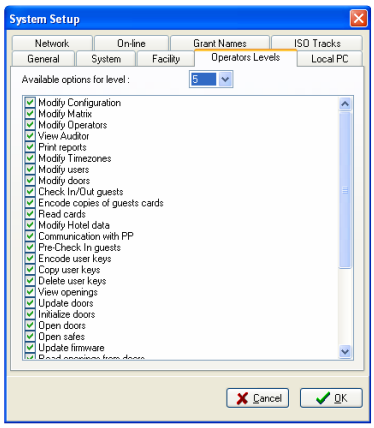
The difference between a "user" of the system and an "operator" of the system is the following: a user is somebody who has an INHOVA key and/or card to open the doors that have a cylinder or a lock. An operator is a user of the system who has access to the management software. That is, s/he has an operator name and password to access to the software and perform all or some of the operations that can be performed with the software. Therefore, the number of operators in the system can be equal to the number of users of the system, but never higher.

The operators can have restrictions regarding the management software of the system. In other words, we can establish different "Operator Levels".

In this screen we are going to specify which operations are allowed in the different levels of access to the software.

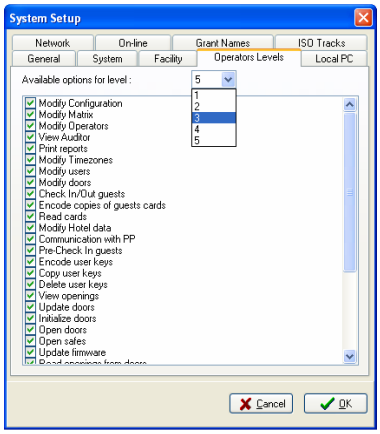
We can have up to 5 levels of access, from 1 to 5, and we can configure different options in each.

In the following screen we can see the highest level: level 5. Logically, this is the level with the highest number of operations allowed.

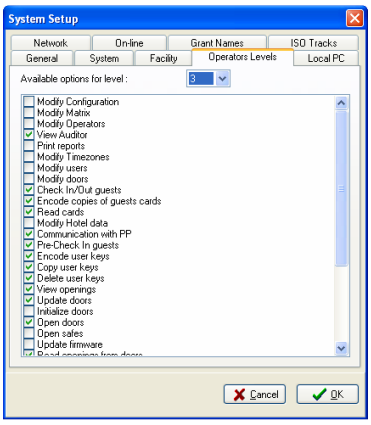


In the example above all the operations are allowed; but this does not always happen. For instance, if we do not want even level 5 to have access to ALL the operations, we will not select it in this screen.

To configure the rest of the levels, 1 to 4, we must select them as shown in the screen below:



Once we have selected the operator level, we click on the operations this level will be allowed to perform, as shown in the screen below:



At the moment we are only configuring the operator levels. Later, when we define the operators, we will determine which level each operator will have.

5.5.2.3- Grant Names

The grants are ONLY available in MAGNETIC, PROXIMITY, DUAL and MIXED installations, that is, they only work with magnetic stripe, proximity, dual and contact-chip locks.

With the grants we can allow users to access to a door or group of doors and update the information about the closing plan without having to go to the door or doors. We only have to record the user card.

When a user inserts her/his card in the lock, the reader of the lock reads the information recorded in the card and analyses it to check whether the user is allowed access. The information analysed is the following:

- System code
- Activation and expiration dates
- Identification of the user
- Closing plan: the lock's control unit checks whether the user is allowed access.

If all the information analysed is correct, the lock will allow access to the user. If any of the points above is not correct, the user will not be allowed access.

If we want to restrict access to a user who has access to a door, we must modify the closing plan and transmit the new information to the locks. This can be quite tiresome if we have to do it often.

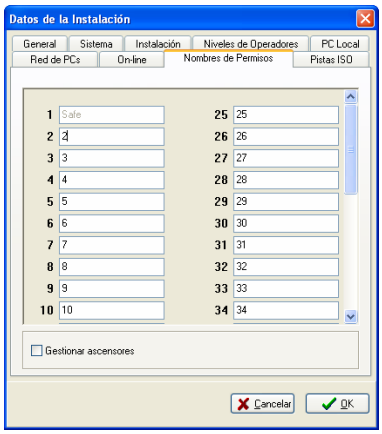
All this happens if we do not have GRANTS. In this case we insert another parameter in the lock: besides checking the previous points, the lock will require another parameter that we have called "Grant". In other words, the lock will require the following elements:

- System code
- Activation and expiration dates
- Identification of the user
- Grant
- Closing plan

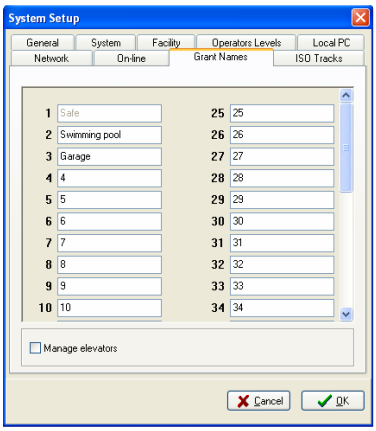
Whether a user will have a grant is decided at the moment we record the card. This allows us to do this at the last minute; if one day we change our mind, we only have to re-record the card with the grant or without it, depending on whether we want to give access to a door or restrict it. That user must have access to that door in the closing plan; if access is not allowed in the closing plan, the user will not be able to open the door even if s/he has a grant.

Grants are very useful tools for hotels, especially for those services that are not free for customers, such as safes, the swimming pool, the garage etc. If we use the grants, we will determine whether a customer will have access to those places at the moment s/he is checking in.

The first thing we must do is create the grant. Grants are created in the Setup menu. We can create up to 47 grants, as we can see in the following screen. The hotel can actually have 48 grants, but the system has already created by default the Safes grant.

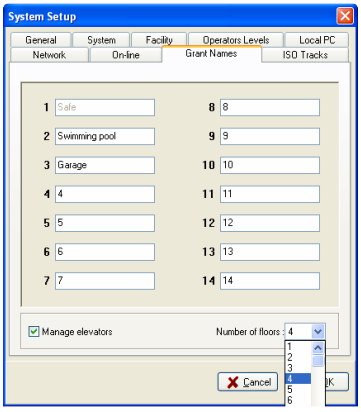


In each field we must write the name of the grant we want to use. For instance Swimming pool, Garage, etc.



The *manage elevators* option allows creating grants for each floor of the hotel. This option allows controlling the movement of guests in the hotel. It is possible to manage up to 40 floors using different relays, but in this case, the total number of 48 grants will be reduced to 14 grants for other applications

In the *number of floors* file, we are going to define the number of floors of the hotel.



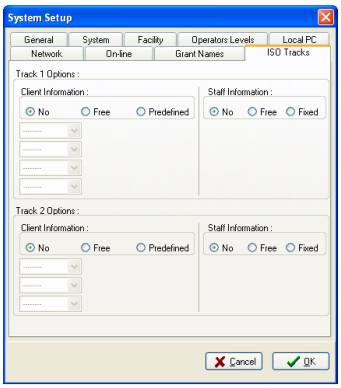
After that, we will configure certain locks to meet that parameter. We will give access to the users always or according to the time zone specified in the closing plan, and we will give them a grant depending on whether we want them to have access to the doors or not.

With the grants we finish setting up the installation. The next step will be to create the users, the doors, the time zones, the calendar of public holidays, etc.

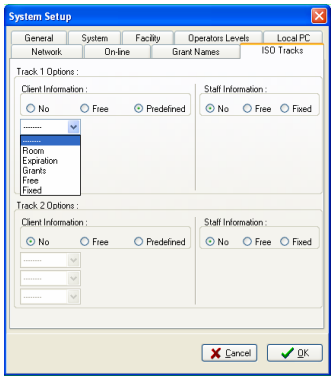
The users, the doors and the time zones are created separately. Once we have defined them, the system will create a matrix where we will decide which users will have access to which doors and when; that is, we will create the closing plan.

5.5.2.4- ISO tracks

In a magnetic stripe card lock system, the magnetic stripe cards have three tracks where it is possible to encode some information to use it in the INHOVA system in order to identify the users. The INHOVA system use only the third track, therefore the track 1 and 2 are free to encode them according to the client needs.

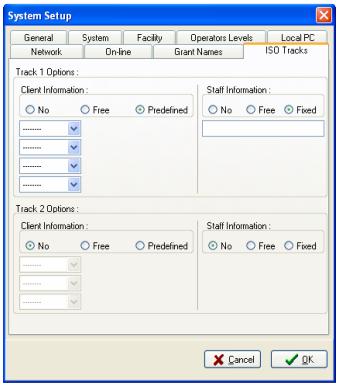


By default, the system will choose the *No* option and the track 1 and 2 will remain empty for clients and staff.



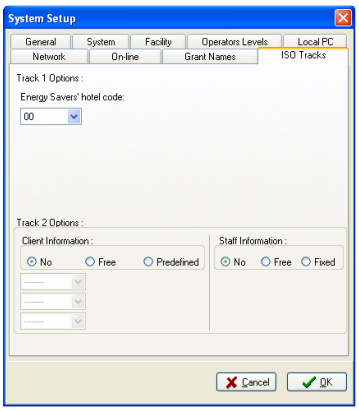
If we choose the *free* option within the *Client Information* area, it allows us to encode the selected track at the check-in. The same happens with the *free* option within the *Staff Information* area, we will be able to encode the selected track when we encode the staff card.

Within the *Client Information* area, if we select the Predefined option the below fields will be activated. When we click over any field, the system will give us the possibility to encode in the selected track the following information: room, expiration, grants, free and fixed (see the Staff Information) that the hotelier will control in his other hotel management systems (i.e. restaurant).



Within the *Staff Information,* instead of predefined option there is the Fixed option. Once this option is selected, the program will show a new field where we can edit any code that we can use to control the hotel staff. In the same way, we can select this option within the *Client Information*, the predefined option.

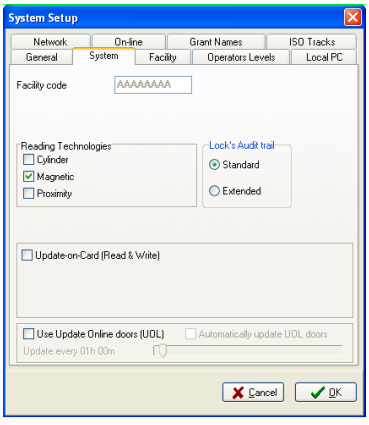
If we use magnetic stripe intelligent energy savers, track 1 will be reserved for the code we are going to assign in the *Hotel Code for energy savers* field. It is recommended to use a different code for each hotel.



5.5.2.5-. System

Each INHOVA system has a system code that guarantees that each locking plan is unique and exclusive, whose code appears in the *installation code* field inside the *System* option. In the field *Reading technology* we have to set the type of technology we are going to use, that is, magnetic stripe card, proximity card, contact-chip technology keys or a combination between the different technologies. Depending on the number of events we want to record or the number of users we want to give access to the lock or cylinder, we will have two options to configure the system of the type of auditor. *Normal* mode allows recording 1.000 events and giving access to 1.000 users (master + guests) and *extended* mode allows recording 650 events and giving access to 1.500 users (master + guests).

When the locks work with magnetic stripe technology we will not have the possibility to select *Update on-Card (Read&Write)* and neither *Use Wireless Online doors*, so selecting the *magnetic* option will be enough.

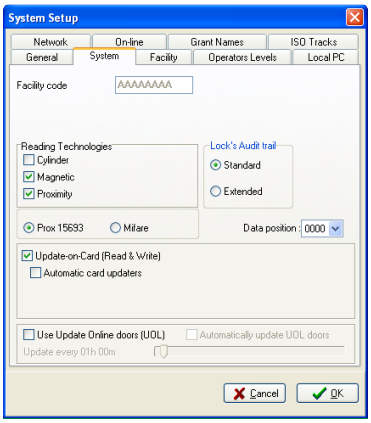


In case that the lock Works with proximity technology, we will have to choose what type of technology we want to use*: 15693* proximity or *Mifare* proximity.

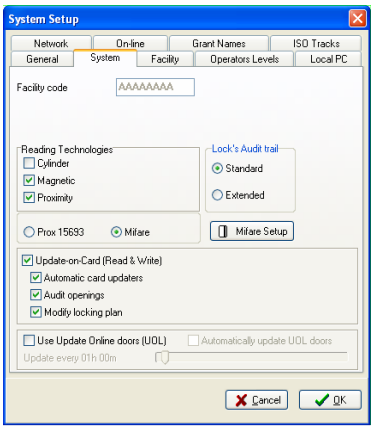
When selecting technology type *prox 15693*, the program will give the opportunity to choose in which position we want the information to be saved in the card. For this, we will define in the field *data position* the location wanted for the record of the user. In case that the card is not shared with other systems it is not recommended to change it.

We can also use some of the functions of the read&write feature selecting the options *update-on-card (read & Write)* and *card updaters.* This will allow us revalidating the users that have assigned this option, according to what is explained in point 5.5.4. master cards menu.

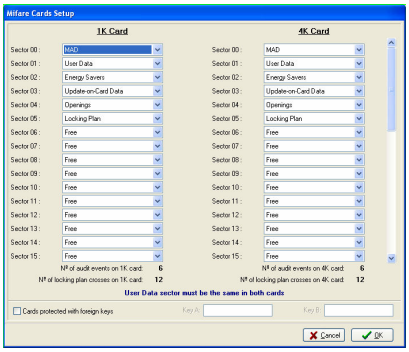
In an installation, apart from the electronic locks and autonomous electronic cylinders, we can install wireless on-line electronic locks. In the case of the wireless on-line electronic locks we will chose the option *use Wireless Online doors*. The option *Automatically Update UOL doors* will be activated. If we select this option the system will collect the events of the wireless on-line electronic locks from time to time.



If we select *Mifare* technology, apart from revalidating the user, the user will be able to modify its locking plan and we will have the opportunity to collect the openings of the user. For this, we have to activate the fields *Automatic card Updaters, Audit openings, Modify locking plan.* In the User menu –see point 5.5.4- we are going to configure this features depending on the utility we want to give them.



Click *Mifare Cards Setup* and we will see the following screen:


Mifare Cards Setup
1K Card
4K Card
Sector 00 : MAD
Sector 01 : User Data
Sector 02 : Energy Savers
Sector 03 : Update-on-Card Data
Sector 04 : Openings
Sector 05 : Locking Plan
Sector 06 : Free
Sector 07 : Free
Sector 08 : Free
Sector 09 : Free
Sector 10 : Free
Sector 11 : Free
Sector 12 : Free
Sector 13 : Free
Sector 14 : Free
Sector 15 : Free
Nº of audit events on 1K card: 6
Nº of locking plan crosses on 1K card: 12
Nº of audit events on 4K card: 6
Nº of locking plan crosses on 4K card: 12
User Data sector must be the same in both cards
Cards protected with foreign keys
Key A:
Key B:
Cancel
OK

As it appears in the *Mifare Card* Configuration menu, the systems will allows us to communicate with Mifare technology SmartAir electronic locks by using Mifare 1KByte or 4Kbytes cards.

Depending on the type of cards we have, it will be necessary to customize the sectors of each card according to the necessities of the installation.

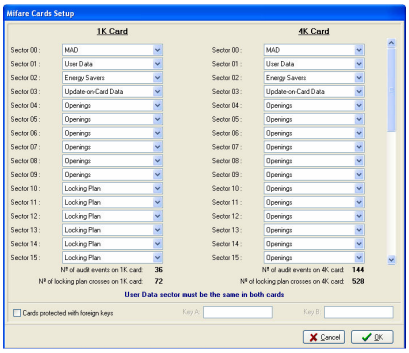
It is important to indicate that both type of cards can work in the same installation, but the Mifare 4KBytes card will be limited to the first 15 sectors of the Mifare 1KByte card, that is, it will have the same capacity of a Mifare 1KByte card,

Sector 00 stays reserved for the MAD, the unique code of the card. This sector is not configurable.

By default, the data of the user will be stored in sector 01, but it is possible to store them in any other sector.

In case we select option energy savers in the setup menu –see point 5.5.2.6-, sector 02 will be reserved for energy savers' codes. It will not be possible to store any other information.

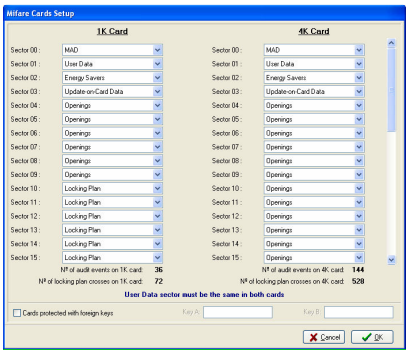
In an installation with read and write feature (UoC: Update on card), it is necessary to create the sector *Update-on-Card Data* after the user data and/or the energy saver data (in case we select this option) in the sector 03.


Mifare Cards Setup
1K Card
4K Card
Sector 00 : MAD
Sector 01 : User Data
Sector 02 : Energy Savers
Sector 03 : Update-on-Card Data
Sector 04 : Openings
Sector 05 : Openings
Sector 06 : Openings
Sector 07 : Openings
Sector 08 : Openings
Sector 09 : Openings
Sector 10 : Locking Plan
Sector 11 : Locking Plan
Sector 12 : Locking Plan
Sector 13 : Locking Plan
Sector 14 : Locking Plan
Sector 15 : Locking Plan
Nº of audit events on 1K card: 36
Nº of locking plan crosses on 1K card: 72
Nº of audit events on 4K card: 144
Nº of locking plan crosses on 4K card: 528
User Data sector must be the same in both cards
Cards protected with foreign keys
Key A:
Key B:
Cancel
OK

The rest of the sectors stay free to record the openings of the user and modify its crosses.

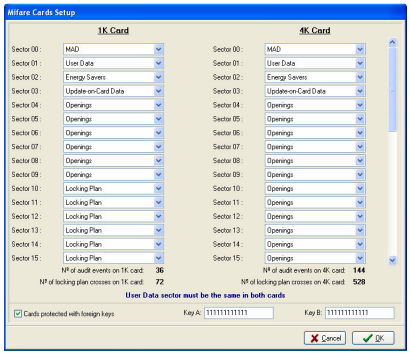
The availability in the Mifare 1KByte will be from sector 04 to sector 15 and in the Mifare 4Kbytes from sector 04 to sector 39.

For each sector 6 openings are recorded and 12 crosses are modified.



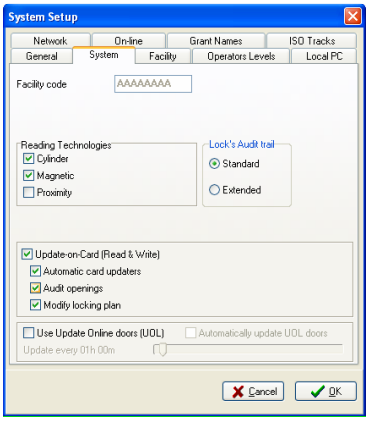
Sectors with openings and crosses must be grouped as it appears in the previous image:

In case of using Mifare classic 1K cards that are also used in other systems and that are protected with A and B codes, it is necessary to add those codes, so that Inhova can accede to the cards. For this, select the option *Card protected with foreign codes* and write the codes of the card in the fields *code A* and *code B.*



The read and write (UoC) feature is only available with mifare classic 1K and 4K cards. The mifare ultralight cards will work with read feature, due to their 64 Bytes memory.

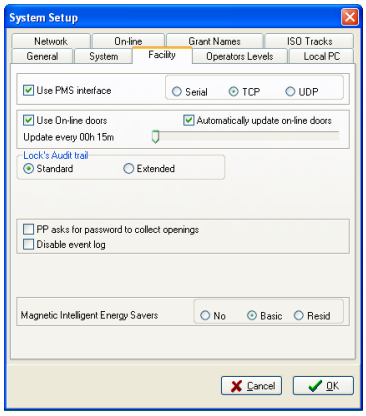
In case of having an installation with electronic cylinder where you want to assign the read and write feature (UoC), you will have to select the options *Update-on-card (Read & Write), Automatic card updaters, audit openings* and *Modify locking plan* (See the picture below).



5.5.2.6-.Installation

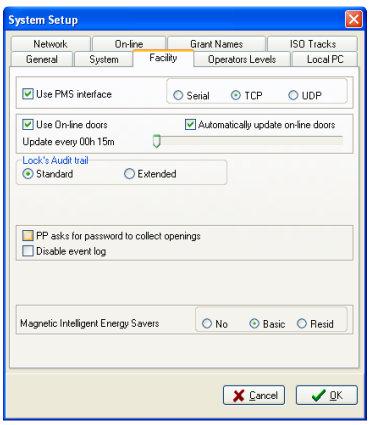
There are three connection ways to communicate with the PMS (Property Management System) of the hotel. Activate option *Use PMS Interface* and three options will be activated:

- Serial: It communicates via RS232
- TCP and UDP: They communicate via Ethernet



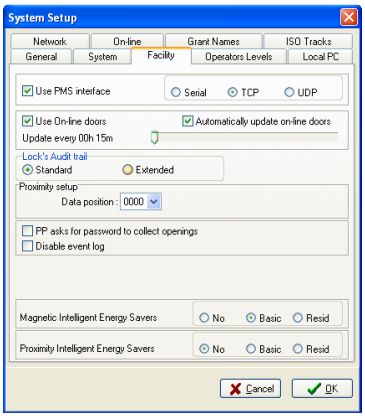
In an installation, apart from the electronic locks and autonomous electronic cylinders, we can install wall readers that can be managed in off-line or on-line mode. If the wall readers are on off-line mode, they are configured in the same way as the autonomous electronic locks -see point 5.5.3-. If the wall readers are on-line, we have to choose the option *Use on-line doors*. The option *Automatically update on-line doors* will activate. If we select this option, the system will collect the events of the on-line wall readers from time to time.

Depending on the number of events we want to record or the number of users we want to give access to the lock or cylinder, we will have two options to configure the system of the type of auditor. *Normal* mode allows recording 1.000 events and giving access to 1.000 users (master + guests) and *extended* mode allows recording 650 events and giving access to 1.500 users (master + guests).

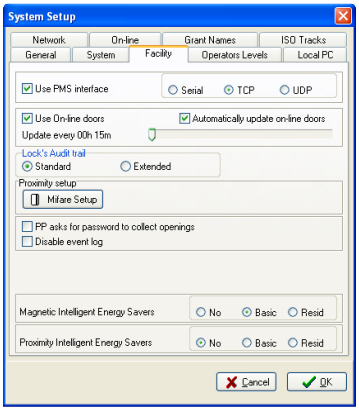


When selecting technology type *prox 15693*, the program will give the opportunity to choose in which position we want the information to be saved in the card. For this, we will define in the field *data position* the

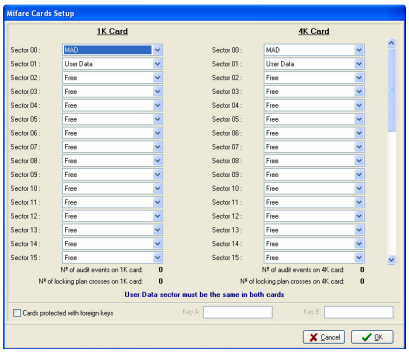
location wanted for the record of the user. In case that the card is not shared with other systems it is not recommended to change it.



If we select Mifare technology, in the *System menu, w*e have to click on *Setup Mifare:*



The next screen will appear:



As it appears in the *Mifare Card* Configuration menu, the systems will allows us to communicate with Mifare technology SmartAir electronic locks by using Mifare 1KByte or 4Kbytes cards.

Depending on the type of cards we have, it will be necessary to customize the sectors of each card according to the necessities of the installation.

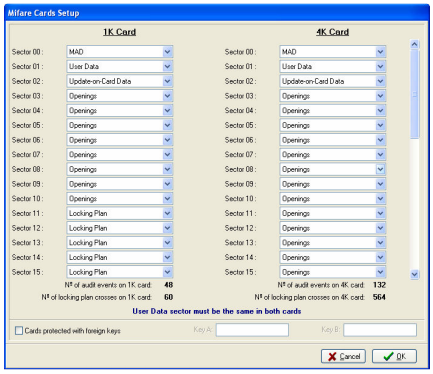
It is important to indicate that both type of cards can work in the same installation, but the Mifare 4KBytes card will be limited to the first 15 sectors of the Mifare 1KByte card, that is, it will have the same capacity of a Mifare 1KByte card,

Sector 00 stays reserved for the MAD, the unique code of the card. This sector is not configurable.

By default, the data of the user will be stored in sector 01, but it is possible to store them in any other sector.

In case we select option energy savers in the setup menu –see point 5.5.2.6-, sector 02 will be reserved for energy savers' codes. It will not be possible to store any other information.

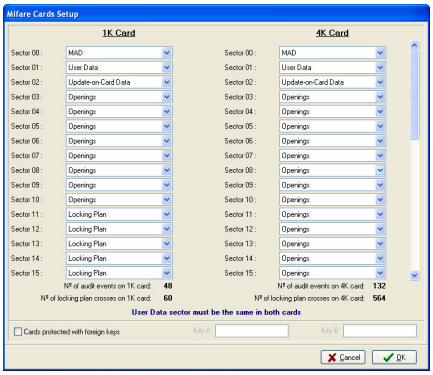
In an installation with read and write feature (UoC: Update on card), it is necessary to create the sector *Update-on-Card Data* after the user data and/or the energy saver data (in case we select this option) in the sector 03.



The rest of the sectors stay free to record the openings of the user and modify its crosses.

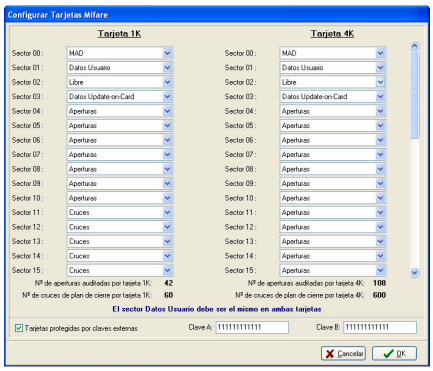
The availability in the Mifare 1KByte will be from sector 04 to sector 15 and in the Mifare 4Kbytes from sector 04 to sector 39.

For each sector 6 openings are recorded and 12 crosses are modified.



Sectors with openings and crosses must be grouped as it appears in the previous image:

In case of using Mifare classic 1K cards that are also used in other systems and that are protected with A and B codes, it is necessary to add those codes, so that Inhova can accede to the cards. For this, select the option *Card protected with foreign codes* and write the codes of the card in the fields *code A* and *code B.*



The read and write (UoC) feature is only available with mifare classic 1K and 4K cards. The mifare ultralight cards will work with read feature, due to their 64 Bytes memory.

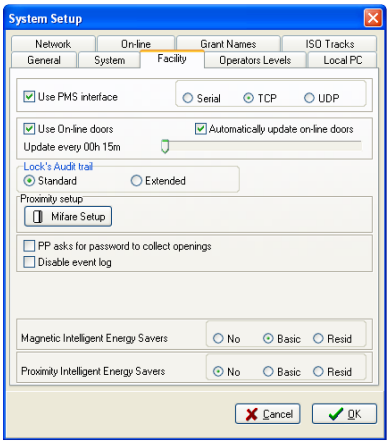
Once the *Setup Mifare* is configured, if we select the option *PP ask for password to collect openings*, when the PP connects with the lock to collect the openings of the lock, it will ask for a password to continue with the operation.

The option *Disable event log,* gives the chance to disable the creation of records in the lock.

When using the energy savers, in the option *intelligent magnetic energy saver* and/or *intelligent proximity energy saver* we have to choose if the Start-up is going to be in Basic model or Residential model.

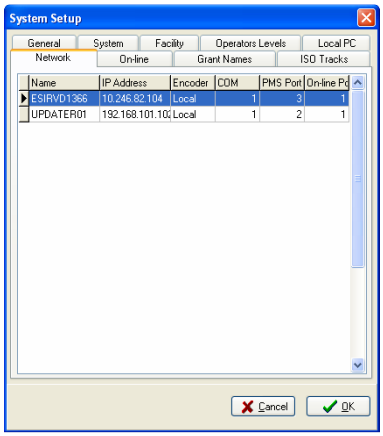
In the Basic model we create a system code for all the energy savers of the hotel. This is an easy and ideal solution for the hotels.

The Residential model creates a system code for each energy saver. This solution is ideal for residences, as it avoids guests interchanging cards during the stay to activate energy savers of other rooms.



5.5.2.7- Network

If we click over the Network option in the System Setup menu, we will get into the communication menu. In this menu, all the options will be filled out automatically. That is, the INHOVA system is ready to obtain the required information automatically. We will see the following screen:



The *Computer Name* is its identification name within the computer network where the INHOVA system is running. This field will be filled out itself automatically. In case the field is empty check the Network option within Control Panel option of your computer. Click over the identification option and verify that PC Name field is not empty. If that happens, write the identification name and call your distributor.

The fact that the *Name* field is empty can generate problems when the system is communicating with the portable programmer.

The INHOVA system will fill out the *IP Address* automatically. In case the computer does not find the address, call your distributor.

It is possible to manage the *Encoder* locally or remotely. The INHOVA system will fill out this field automatically.

The *COM* port is the serial channel of the computer that INHOVA system will use to communicate with the encoder in case we have a lock system and with the portable programmer in case we have a cylinder system. The portable programmer connects to the computer via the RS232 port. The normal situation is that this serial port is configured like COM1, but it can happen that this port is used for another application, e.g. a modem. In this last case, check in your computer the Devices Management menu, to find out which serial port (COM2, COM3 or COM4) is using the serial port RS232 and select it in the Network menu of the INHOVA software.

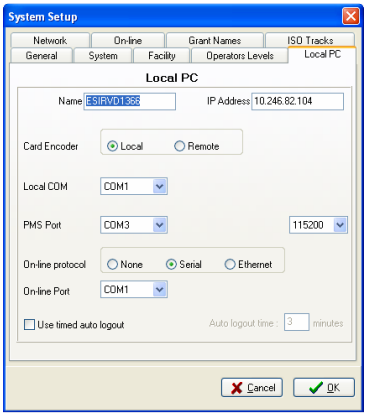
The *PMS port* informs us about the port that communicates with the PMS. In case we select an Ethernet communication in the Setup menu, it uses by default the 7777 port.

The *On-line port* informs us about the port address that communicates with the Area Unit. In this case the system is using the COM3.

There are computers that instead of having the RS232 serial port, they have the USB port. In this case, we need to use a USB-RS232 adapter and follow the procedure described above. It is important to know that INHOVA will only recognise 4 serial ports. If you have any problem, do not hesitate to contact your distributor.

5.5.2.8- PC Local

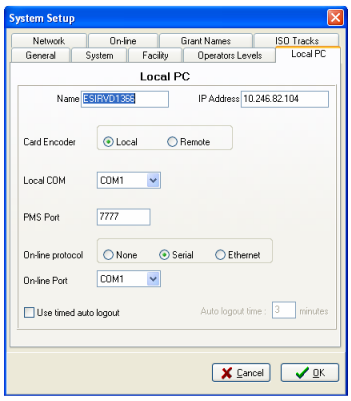
If we select the Local PC option in the System Setup menu, we will see the following menu, where, as well as in the Network menu, we can see the name and IP address:



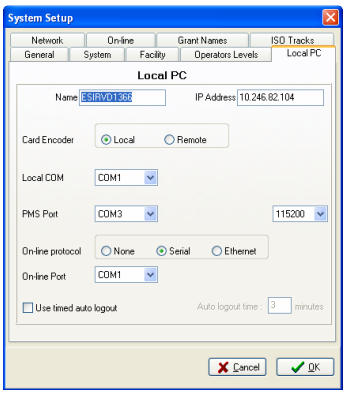
In the *Card Encoder* field, we can select the local or remote option. The local option defines an INHOVA system where the PC has its own card or key encoder. Otherwise, the remote option will allow us to use an encoder which is in the network system, not being necessary to connect physically to the computer.

The *local COM* field defines which computer serial port is communicating with the encoder.

In case we have selected the *Use PMS interface* in the Facility menu, by default the system will select the 7777 PMS port, which is the address that the INHOVA system uses to communicate with the PMS. If it is not possible to use this address, we can use another address between the following figures: 5000 and 30000.

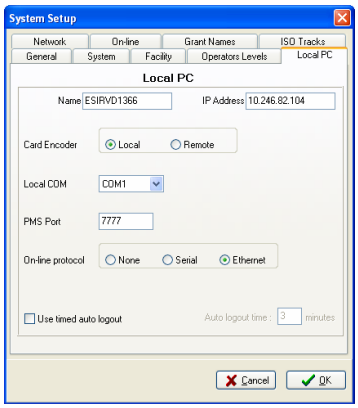


In case we select option *series* in the setup menu, in the field *PMS port* will appear by default the COM3 port, but it is possible to set any other port of the PC. It allows also adapting the transmission speed of the data to the necessities of the system.

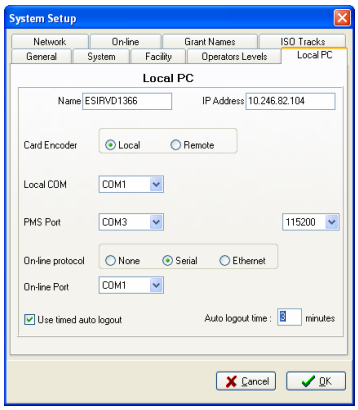


Besides, if we have selected to use an On-line door, the system will show us the *On-line protocol*, where by default the system selects the first option *none*. If we have on-line wall readers, we will select the *Serial* option. Next, the system will activate the *On-line port* option where we will configure the communication channel that we want to use between the computer and the area unit, taking into account that it is going to be the same that we are going to use to connect the encoder and portable programmer.

In case we choose Ethernet option:

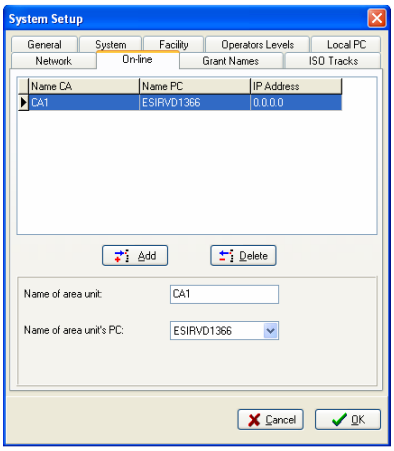


We can use the *timed auto logout* option like screen protector. In this case, if nobody uses the computer for a while the system will be blocked automatically. It will be necessary to enter the operator name and code to open the programme. It is possible to modify the value (minutes) of the timed auto logout.



5.5.2.8- On-line

If we select the *On-line port* option in the Local PC menu, the *On-line* menu will be activated in the System Setup menu. Within the On-line menu we will define the Area Unit and the PC that manages it. In the field *Name of area unit*, we will define the name of the Area Unit, in the field *Name of Area Unit's PC,* we will define the PC which connects to the Area Unit and finally in the *IP address* we will define its IP address.



5.5.3- Doors Menu

On the Doors menu we create all the doors where we are going to install an INHOVA electronic lock.

As we have already explained, the INHOVA system divides the doors of a hotel in different groups. The doors in each group are similar and have the same or a similar use. These groups are the following:

- Rooms
- Suites (a suite is a room with two or more rooms inside it)
- Common access doors
- Access control doors (staff doors)
- High transit doors: the INHOVA system will have high transit doors when the number of users with access to a specific door exceeds 1,500.

We will define the group each door belongs to, as well as all its features, such as whether it will require a grant or not.

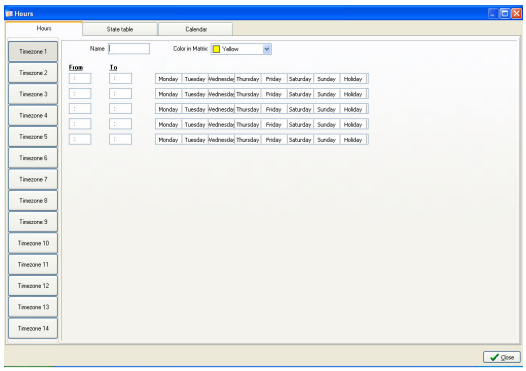
The locks can operate according to different modes or states. These states are: Open, First User, Keyboard or Card, Normal, Card + Keyboard and Double User. In addition, we will be able to change the operating mode automatically according to certain tables called State Tables. Therefore, one of the characteristics we will have to define is the operating mode which the lock will operate in, and whether it is going to follow a state table or not.

To define whether the door will follow a state table or not, we first have to create the state tables of the hotel.

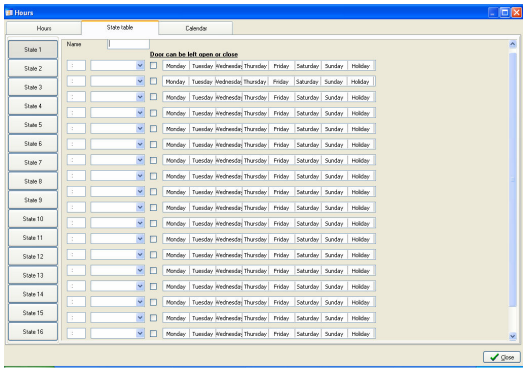
Finally, we have to define which customers will have access to common access doors; that is, we must create the programming for the customers.

5.5.3.1- State Tables

The state tables are defined in the Timetables menu of the INHOVA system. If we click on the Timetables button of the main screen of the INHOVADATA program we will see the following screen:



If we click on the "States" label of the screen, we will see the screen of the state tables.



With the INHOVA system we can create 16 state tables with up to 16 state changes each.

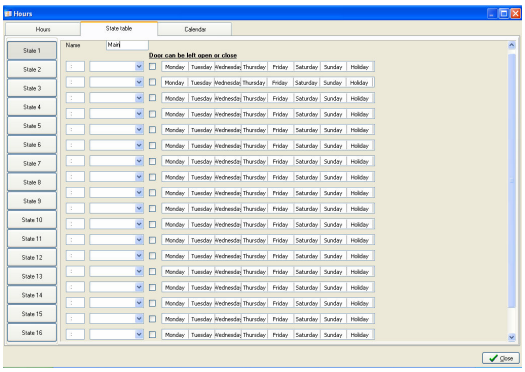
By default, when we open the States screen we will see a table called "State 1".

All the locks are supplied in the "Normal" state. That is, all users must insert and remove their card to open the door. Only users with authorized access will be able to open the door.

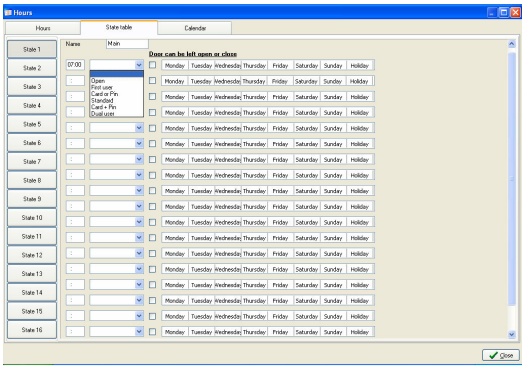
If the lock is in the initial state, it will also be in the "normal" operating mode (even if the lock has a keyboard).

For instance, let us suppose that the hotel's main door will be opened every day of the week from 07H00MN to 22H00MN. The doors in the corridors will be opened from 08H00MN to 21H00MN every day of the week. Therefore, for this example we will need two state tables: one for the main door and one for the doors in the corridors.

Let us create the table for the main door. In the Name field of State table 1, we will write "Main", as shown in the screen below:

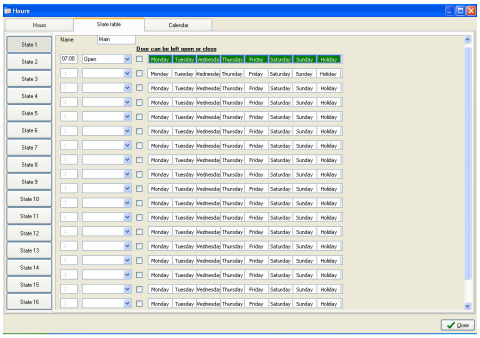


As mentioned, the main door will open automatically at 07H00MN, and therefore the first state change will be:



First we write the time in which the change will take place, and then select the state we want the door to change to from the drop-down list, as we can see in the screen above.

Once we have defined the change, we must select in which days of the week we want that change to happen. In this example the change will take place every day of the week; hence we must click on all of them, including public holidays, and turn them green, as in the screen below:



The doors that follow this state table will change their operating mode every day of the year and they will open.

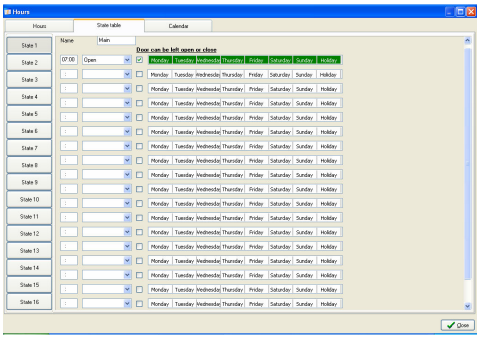
They will not close until we specify a second change, as the lock will change from the Open state to the state indicated in the second change. Logically, in this second change the door will have to close. But what would happen if for whatever reason we want to close the door before that second automatic change?

Initially, in the table we only specify the changes that the lock will perform automatically. Therefore, there must be a manual way of changing the Open state to the Normal state and vice versa. In fact, some users of the system (we will determine which ones later) will be able to change the state of a lock from Open to

Normal mode and vice versa manually. To do this they must insert and remove their card from the lock two consecutive times.

But the lock must allow this to happen. Consequently, we must select the field *Can leave the door Opened or Closed*. If that field is selected, those authorised users will be able to change the mode manually. If it is not selected, nobody will be able to change it, not even authorised users.

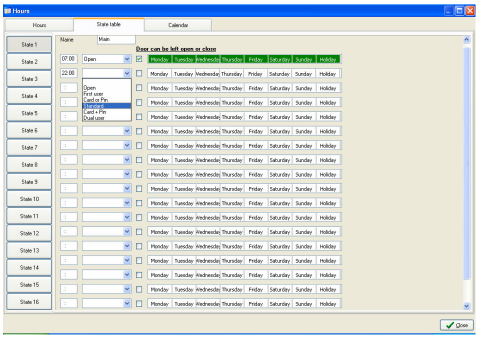
We select the field as in the screen below:



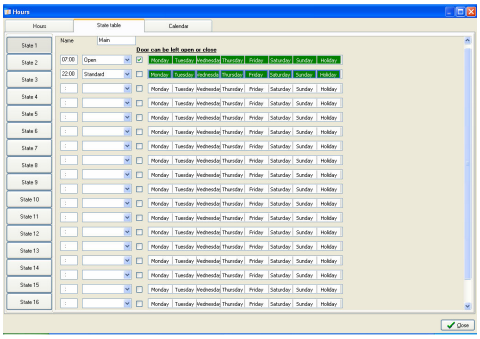
Therefore, the first change means: at 07H00MN the door will open automatically, and from that time authorised users will be able to change the state from open to normal and vice versa manually.

If we leave the table as it is, the locks that follow it will be always open (unless an authorised user changes their state manually), because we have not indicated another state change. This means that we need to include another change to say when the lock will close and how the users who need to open that door will be able to open it.

In the second change, then, the locks will return to the Normal state. We have said that the main door in our example will close automatically at 22H00MN. We will specify that second change:



As that change must happen every day, we select all the days of the week including public holidays

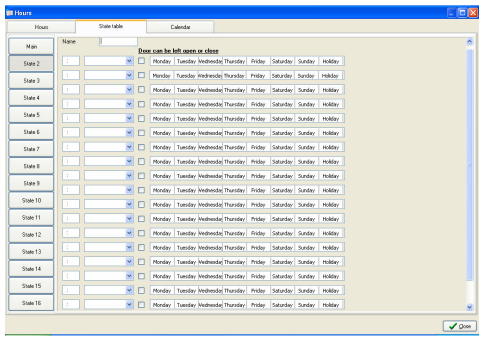


In this second change we will not select the field *Can leave the door Opened or Closed*. This means that every day from 22H00MN the lock will operate in the normal mode and nobody, not even authorised users, will be able to change its operating mode.

We have finished creating the state table for the Main door. We will leave the rest of the changes of the table (up to the possible 16) in blank.

We click on the "State 2" button and start creating the second table that we need. Before we do this the system will ask us whether we want to save the changes made in the first tables or not.

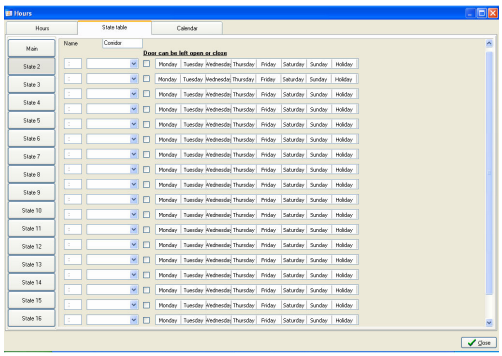
We must click Yes; then we will go to the next table. The button of State 2 will be now called "Main", which is how we have called the table.

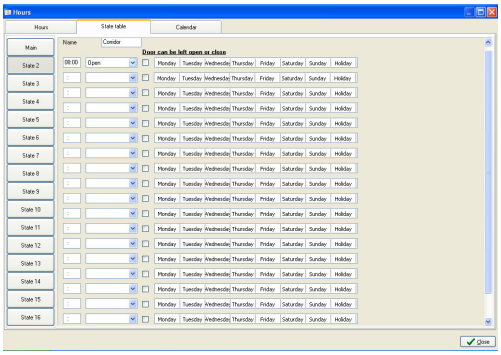


Now we will start with the doors in the corridors. We have mentioned that these tables will open automatically at 08H00MN every day and close at 21H00MN every day.

We must write the name of the state table. We will call it Corridor, as all the doors in the corridors of the hotel will follow this state table.

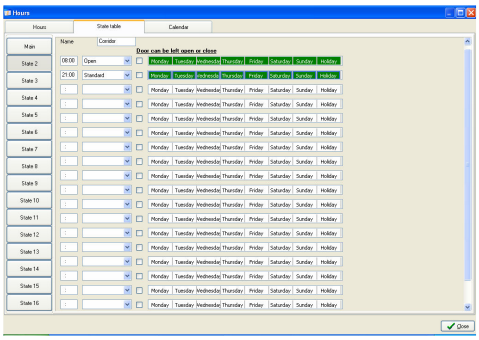
Define the first change in the table:



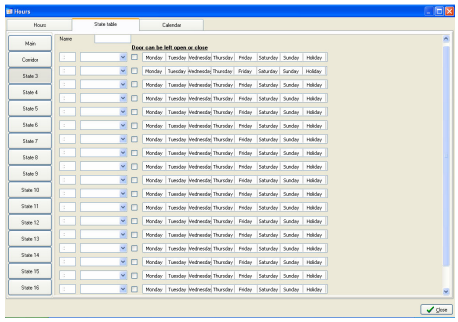


Select the field *Can be left in the Open or Closed mode*, so that authorised users can change the state manually.

Create the second change:



With this we have finished the second table. Click on the third table and save the changes of the second table:

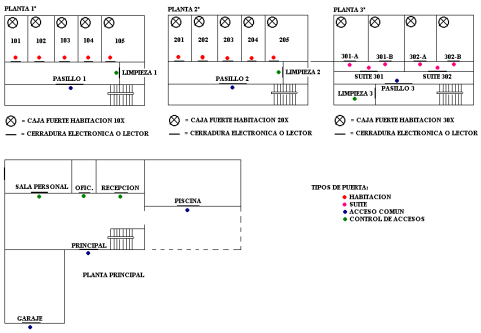


Continue creating as many tables as necessary. In this case, we click on Close and return to the main screen of the INHOVA system.

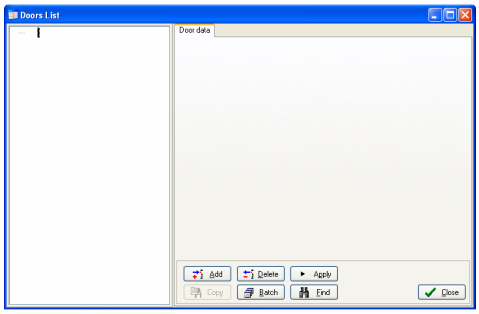
5.5.3.2- General

Once we have created the necessary state tables and defined the grants we are going to use at the hotel (we have created two grants: Swimming pool and Garage, added to the grant of the safes that is defined by default in the system), we can start creating the hotel's doors.

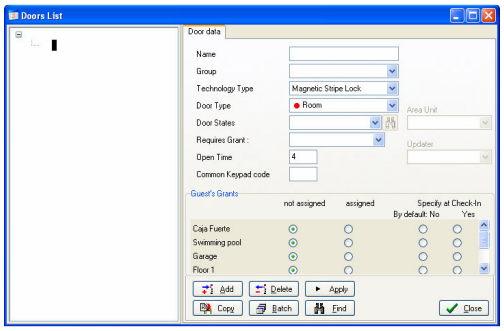
As mentioned earlier, the INHOVA system classifies the doors according to their use: room doors, suite doors, common access doors and access control doors. Therefore, before we start creating the hotel's doors we should draw a plan of the hotel (as shown in the illustration) and classify the doors. This will make the creation of the doors easier.



Click on the Doors button of the main screen of the INHOVADATA program to access the Doors menu of the system:

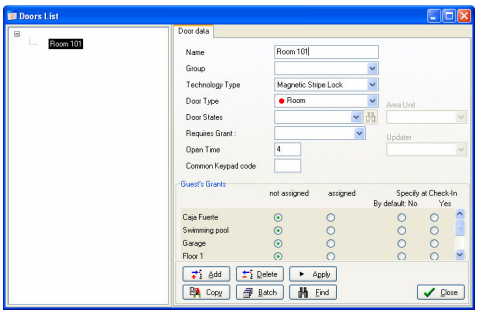


Logically, as we have not created any door yet, the screen is blank. To start adding doors we click on the "Add" button. We will see the following screen:



In this screen we will create the hotel's doors. We will start with the room doors. In the example we have shown above, the hotel's rooms are divided in four floors. We are going to start creating the room doors of the 1ST FLOOR.

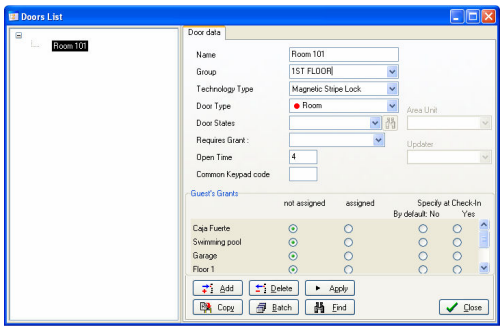
In the field "*Name*", we write the name of the first room of the first floor, that is, Room 101, as shown in the following screen:



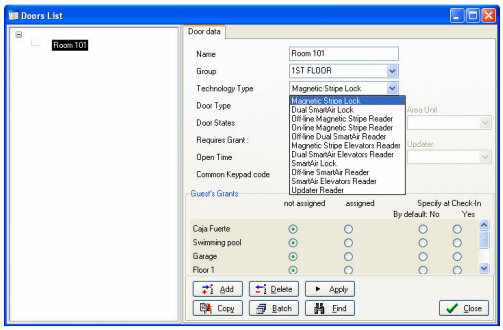
The next field we must fill in is the "*Group*" the door belongs to. This is an optional field, that is, it is not obligatory to fill it in. By dividing the doors into groups we can simplify the management of the hotel's doors. We can divide the doors according to floors, types of doors, or any other criteria that suits the hotel.

In this example we are going to divide the doors according to floors. We will have a group of doors in the 1ST FLOOR, another group in the 2ND FLOOR and so on.

Therefore, in the field *Group* we write the name of the group which room 101 belongs to:



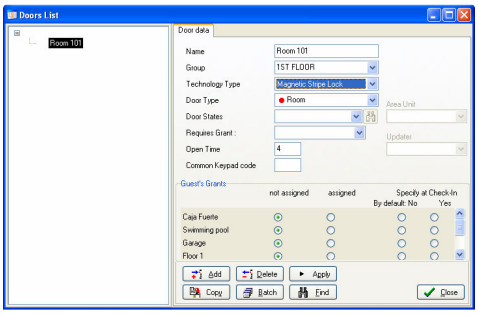
Next define the type of product we are going to install in that door. In this case, we have different control access technologies which we have already defined in the System Setup (see chapter 5.5.2.5) and we will assign to each door the technology that corresponds.



In a magnetic stripe card technology installation, locks select the *Magnetic Stripe Lock* option for the magnetic stripe card and the *Off-line Magnetic Stripe Reader* for the off-line magnetic stripe card wall readers.

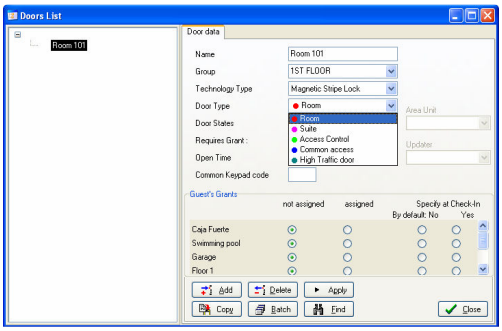
In the doors screen, the option of the safes is not available for security reasons. That is, a safe will always be connected to one room, so that the guest in that room can use the safe with the card s/he uses to open the room door.

Hence, we will define the type of product for room 101, in this case a *Magnetic Stripe Lock*:



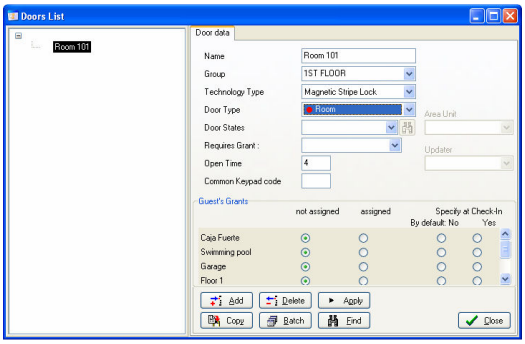
The next step is to define the type of door. We have mentioned the types of doors INHOVA system creates: Access Control Doors, Room Doors, Suite Doors, Common Access Doors and High Transit Doors.

Since we are creating a room, we select Room as the type of door:



Being a room, the screen will show the available grants on the system. Remember that we have created the grants: “swimming pool”, “garage”, “floor 1”, “floor2”, “floor 3” and “floor 4” and the grant of the safe that already exists by default in the system.

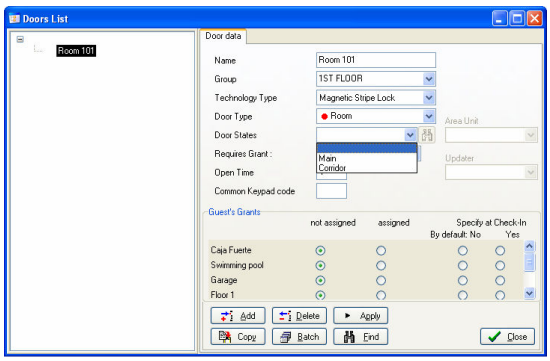
By default, the customer in room 101 does not have these grants. This means that this customer will not be able to use the safe in room 101, the swimming pool or the garage.



The next field is that of the Door States. That is, the State tables we have previously created in the system so that some doors (those we chosen in this screen) change automatically they operating mode: Open, First User, Normal, Card or Keyboard, Card + Keyboard and Double User.

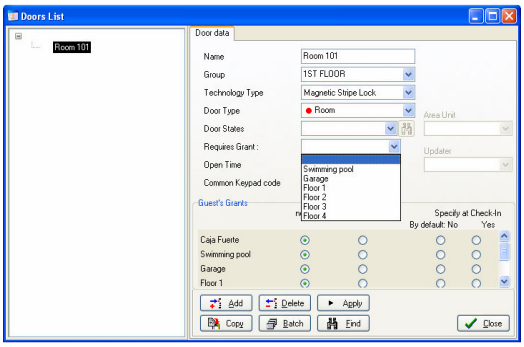
In the case of room 101, we do not want the room to follow any state table. In other words, we want it to always operate in Normal mode (card only), the default mode of locks. Therefore we will leave that field blank.

Remember that we have created two state tables: one for the Main door and one for all the doors of the Corridors.



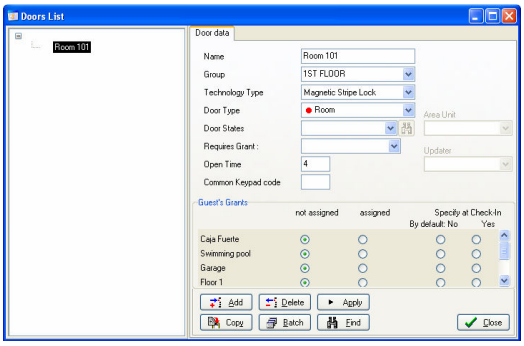
Something similar happens with the next field, “Requires Grant”. As already mentioned, in addition to the closing plan created in the matrix, we can create a grant. In our example, we have created the grants for Safes, Swimming Pool and Garage.

The rooms will not require any grant, and hence we will leave the field blank:

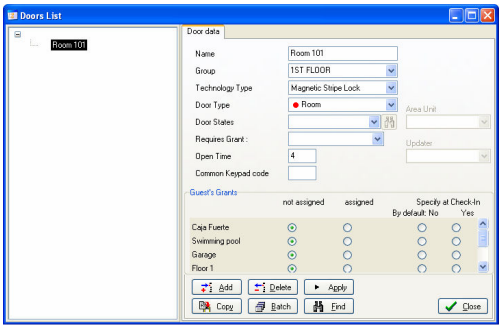


In the next field, “Open Time”, we are going to set the time system’s users will have to open the door once the lock has given them access.

When a user inserts and removes her/his card from the lock, the reader identifies the user and analyses the information stored in its memory to check whether that user is allowed access or not. If s/he is allowed to access, the lock will show it by the flickering of the green warning LED. From the moment the green warning LED starts flickering, the user will have a number of seconds to withdraw the handle and open the door. This number of seconds is indicated in this field. 4 is the default number of seconds, but this can be modified to suit user’s needs.



In the field “Common Keypad code” we specify the four-digit PIN users will have to key in on the lock to open the door, when the door has a keyboard and is operating in the Card or Keyboard mode.

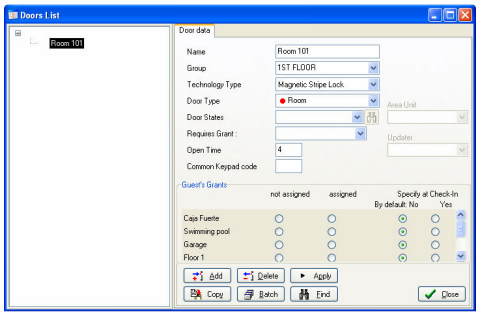


Finally, we must determine whether the guest in room 101 has the grants created in the system or not.

We have four possibilities for each grant:

- Not granted. This means that the guest will never have access to the doors that require that grant.
- Granted. This means that the guest will always have access to the doors that require that grant.
- Grant during Check In, by default is *yes*. This means that we will decide whether the guest has the grant or not when s/he checks in, but by default it will have access to the doors that ask for this grant.
- Grant during Check In, by default is *no*. This means that we will decide whether the guest has the grant or not when s/he checks in, but by default it will not have access to the doors that ask for this grant.

The last option is the most suitable for the customers because the customers in a room will be different every certain number of days. For instance, a customer may want to use the garage and the next one may not.

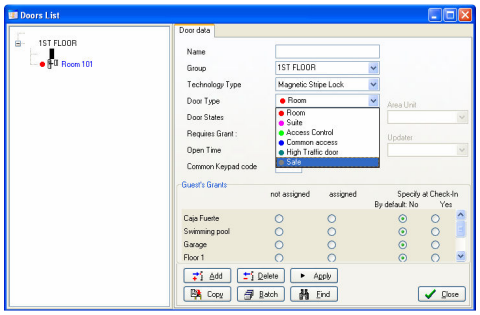


With this we finish defining the door for room 101. To continue creating doors we must click on the Add button.

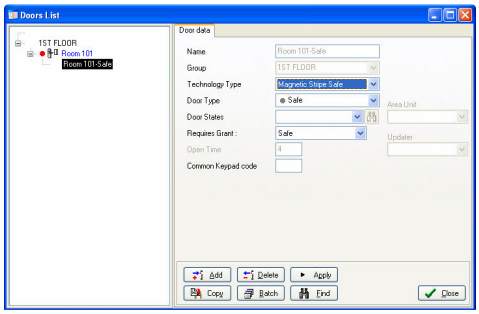
Before we continue, the program will ask us whether we want to save the changes made in the door of Room 101 or not.

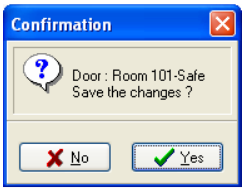
Click Yes button.

Once we have created room 101, the INHOVA system offers the possibility to add a safe to that room. When we save the information about the new room, the screen will show us the field *Type of Technology*, in which we can add a safe to the room, as shown in the example below:



If we select in this screen the option *safe*, in the field technology type, the INHOVA system gives us the opportunity to choose between different safes. In this case, we choose keyboard + card technology by selecting *Magnetic Stripe Safe*. We don't have to add any other data.



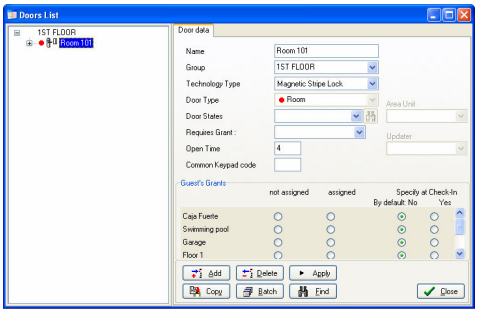


Once we have created the safe in room 101, we click on the Close button. The system will ask us whether we want to save the changes made in Safe 101 or not. Click on the OK button and close the doors screen, and return to the main screen of the INHOVADATA program.

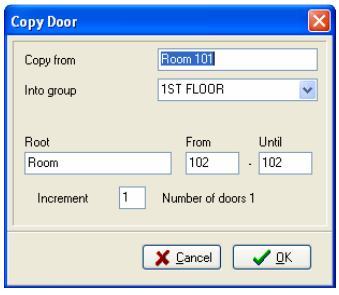
We have now finished with the definition of room 101, including its safe.

All the rooms in the 1ST FLOOR are identical, and the INHOVA system allows us to make a copy of that room.

To do this we must click on the Doors icon of the main screen of the INHOVADATA program to return to the doors screen:



In the column of the left we will see room 101 with its safe on the 1ST FLOOR. If we select the room (in blue) and click on the Copy button, we will see the following screen:



Everything in that screen is determined by default: the root of the

name, the number of the room we want to copy, etc.

We will create rooms like room 101, but with different numbers. We will start with room 102 (or any other number) and copy as many rooms as we need. In our example, there are five rooms in the 1st floor; therefore we will have to create rooms 102 to 105, with an increase of 1. If the numbers of the rooms are odd, from 101 to 109, we would create rooms 103 to 109, with an increase of 2.

To continue with our example, we will fill in the fields below:

Copy from: Room 101. This field will show the room number we have selected in the *doors* screen just before clicking on the Copy button. In this case the room number is 101.

Into group: 1ST FLOOR. The same happens in this field. It shows the name of the group of the room we are going to copy. The name of the group can be modified if wished.

Root: It is the non-numerical part of the door we want to copy. In this case it is the word *Room*, and it is the constant part of the name of all the hotel's rooms.

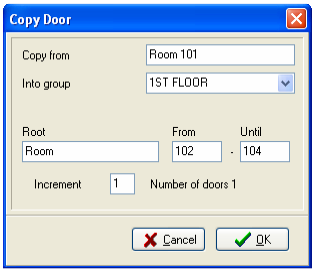
Starting From: 102. It is the number of the room we want to give to the door we want to copy and that it will be like room 101.

Until: 105. We have mentioned that there are 5 rooms on the 1ST FLOOR of the hotel. We have created room 101 manually. The rest of the rooms, 102 to 105, will be copies of room 101.

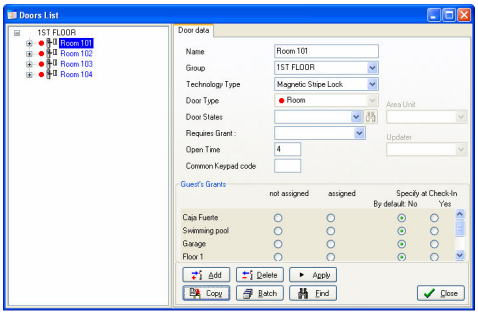
Increment: 1. It is the number increase between the rooms. That is, the number of a room is like the number of the previous one plus 1. This happens because the numbers of the rooms are correlative. If the numbers are odd, the number of a room would be the number of the previous room plus 2, and the increase would be 2.

Next to the field Increase, the program will show us the number of new rooms we are going to create. In this case it will be: *Number of doors 4*

We can see it in the screen below:



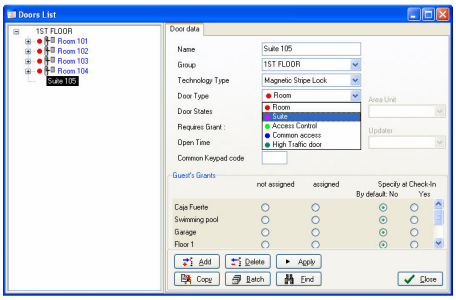
If we click on the OK button, the INHOVA program will create 4 rooms (from 102 to 105) are identical to room 101.



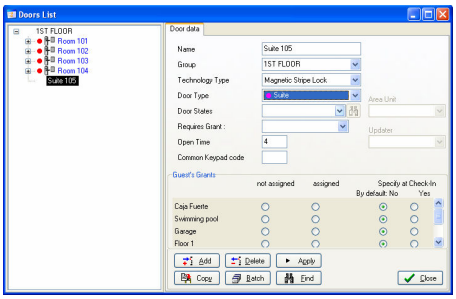
In our example, the third floor has two suites with two rooms inside. That is, we have SUITE 105 with SUITE 105-A and SUITE 105-B inside and SUITE 106 with SUITE 106-A and SUITE 106-B inside.

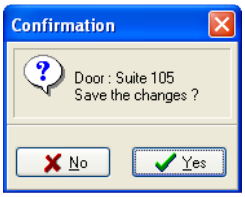
This way, the hotel can either offer the whole SUITE or one of its rooms. That is, the rooms that make up the suite can be offered separately. When a customer wants the whole SUITE, the receptionist must check in SUITE 105. The card or cards recorded will have access to doors 105, 105-A and 105-B. If a customer only wants one of the rooms in the suite, we must check in that room only. That is, room 105-A or room 105-B only. In this case, the cards recorded will have access to the front door of suite 105 and the room chosen by the customer, but not to the other room.

We will, then, create suite 105. In the Doors screen of the INHOVA program we click on Add and fill in the fields, as we have done with the other rooms. In this case the name will be Suite 105, the group 1 ST FLOOR, and the type of technology "Lock". It does not require a grant and it does not follow a state table. In the Type of Door we must select the option *Suite* instead of *Room*.



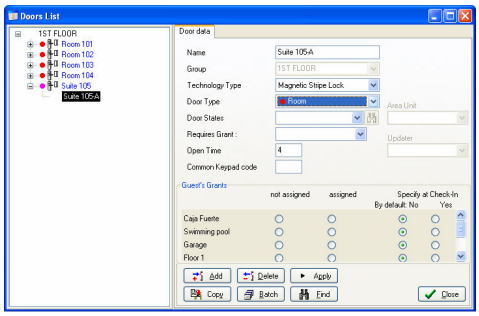
Regarding the grants, the customer in the suite will be granted with all the grants of the hotel by default (but this can be modified).



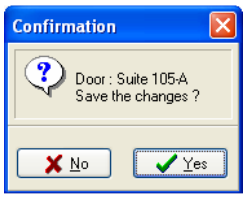


Once we have created Suite 105 we must create rooms 105-A and 105-B. To do this we click on the Add button. The program will ask us whether we want to save the changes made or not. Click on YES button.

To add a room inside a suite, we must create a room by clicking on the Add button after creating or selecting a suite. This room will be created in the same way as the rest of the rooms. That is, we will define the name, the type of technology and so on. In the field Type of Door we will select *Room* (since it is a room inside a Suite). In our example, the room we want to create is room Suite 105-A inside Suite 105.

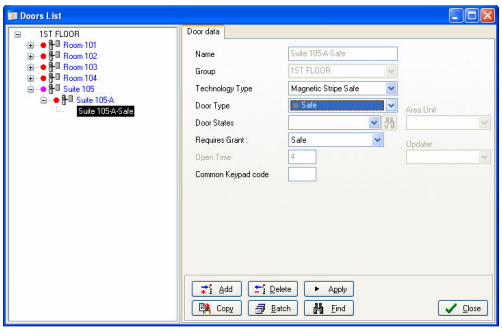


Once we have created it, we can create a safe for that room. The procedure is the same as the one followed to create the other safes of the hotel. We must click on the Add button. The program will ask us whether we want to save the changes made in Suite 105-A.

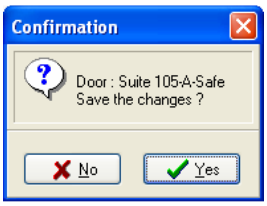


Select Yes.
In door type we select *Safe*, in technology type select *Magnetic stripe safe*, In the option Requires Grant choose *Safe* and click Apply.

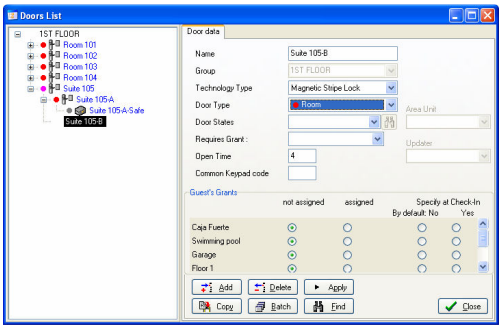
The safe associated to the room is automatically created.



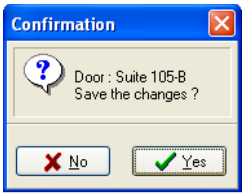
To create the other room inside the same suite, we click on the Add button. As usual, we need to confirm that we want to save the changes made to the Safe in room 105-A.

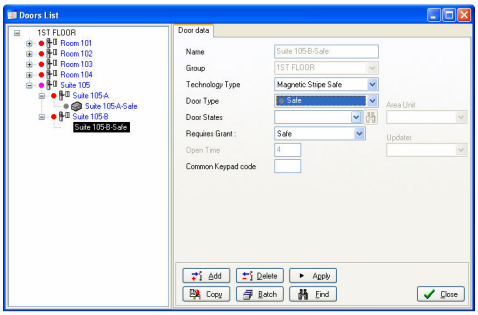


We create the room Suite 105-B in the same way as the other room:

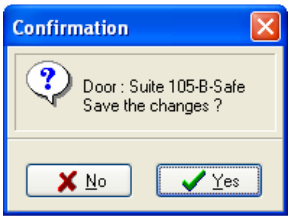


Then we add the safe for that room:





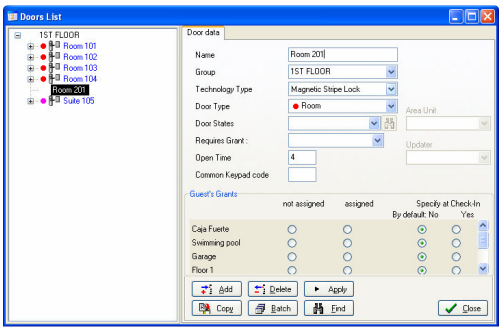
Once we have created the safe for the room Suite 105-B, the creation of Suite 105-B will be completed. We must then click on the Close button and save the changes made.



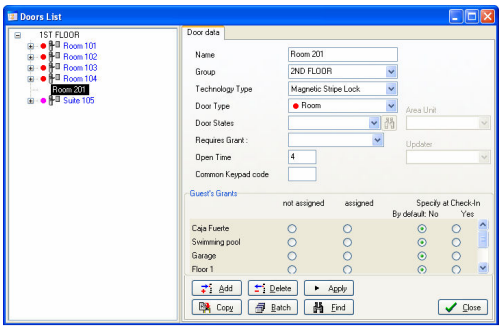
In the same way we have created the Suite 105, we are going to create the Suite 106. With this the creation of the FLOOR 1 rooms will be finished.

We are going to create now FLOOR 2 rooms. The process is similar to the previous one, but in this floor the technology is dual. Define room 201 and then copy that room.

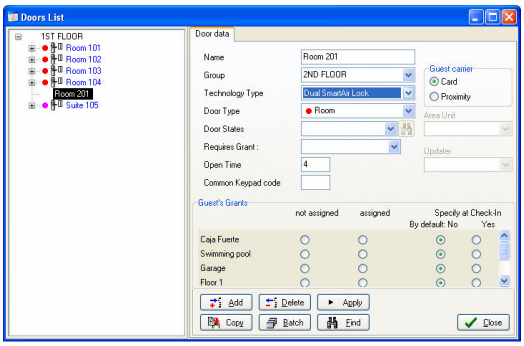
To create room 201, click on the Add button and define its name: Room 201, as shown in the following screen:



The next field is the group the door belongs to. As we have already mentioned, the group will be the 2ND FLOOR. According to this we will write 2ND FLOOR in the field Group:

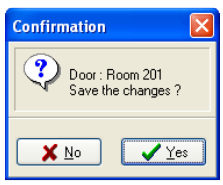


Next, in technology type, select the option *Dual Smartair lock*. When selecting this option, the option *Client technology* will appear. This option gives us the possibility to choose between *card and proximity*, depending on the technology we are going to use. This option can be changed when doing the check-in. The rest of the features are defined in the same way as room 101.

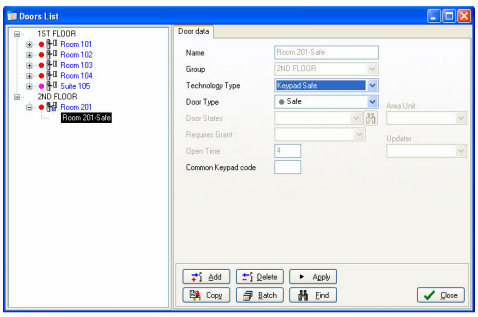


Once we have created room 201, we will create the safe for that room. To do this we must click on the Add button.

The program will ask us whether we want to save the changes made in room 201. We must click on the YES button.



The program allows us adding the safe associated to the room 201. Select *Safe* in Door type and *Keyboard safe* in Type of technology.



Once we have created the safe we click on the Close button and return to the main screen of the INHOVA program. The program will ask us whether we want to save the changes made in the safe of room 201 that we have just created or not.

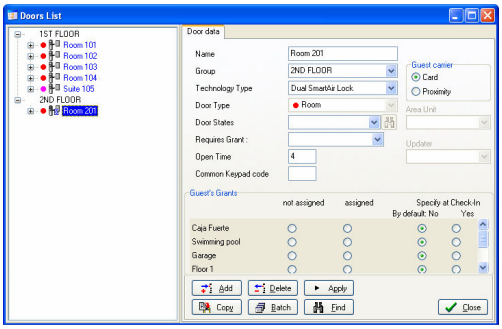
Click on the YES button.

The next step is to create rooms 202, 203, 204 and 205 of the second floor, which will be identical to the room 201 that we have just created.

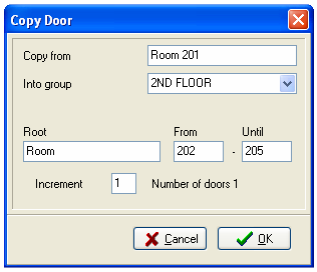
As in the case of the rooms on the first floor, we will use the Copy function.

On the main screen of the INHOVA program we click on the Doors icon and go to the Doors screen of the installation.

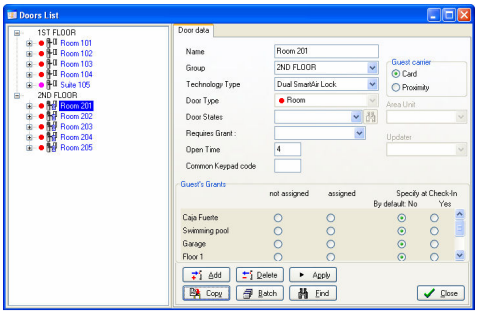
We select the room 201 we have just created, which is the room we want to copy:



Click on the Copy button and go to the next screen:

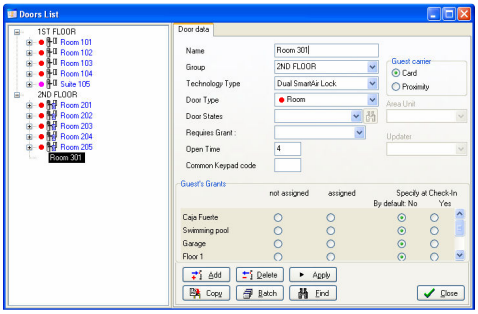


Like in the first floor, we have to copy 4 rooms, 202 to 205 with an increase of 1. If we click on the OK button the rooms will be created automatically:

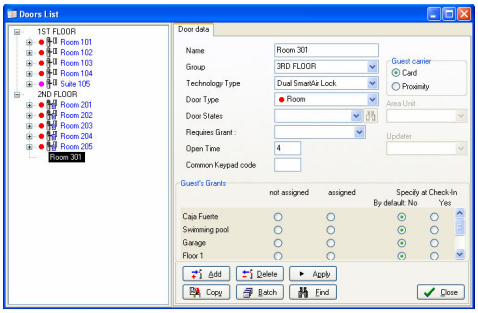


With all this, the second floor is finished and we continue with rooms of FLOOR 3. The process will be similar to the previous ones, but in this case the technology is proximity. We define room 301 and then we copy the room.

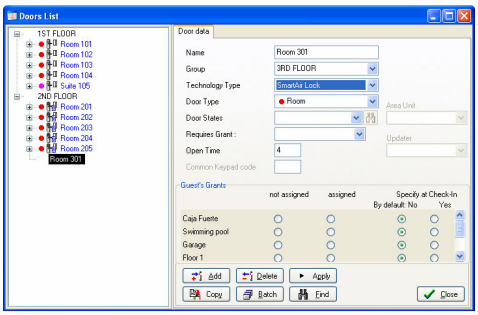
To create room 301, click in Add. Start defining the room by its name: Room 301, in the same way as the following screen.



The next field is the group the door belongs to. As we have already mentioned, the group will be the 3RD FLOOR. According to this, write 3RD FLOOR in the field Group:



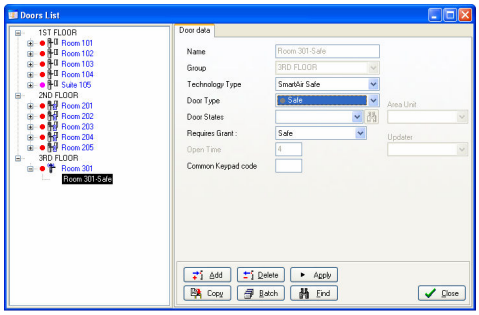
Next, in technology type, select the option *SmartAir Lock*, in the same way as the following screen:



Once we have created room 301, we will create the safe for that room. To do this we must click on the Add button.

The program will ask us whether we want to save the changes made in room 301 or not. Click on the YES button.

The program gives now the possibility to add the safe associated to room 301. Select *Safe* in door type and *Smartair Safe* in technology type:



Once we have created the safe we click on the Close button and return to the main screen of the INHOVA program. The program will ask us whether we want to save the changes made in the safe of room 301 that we have just created.

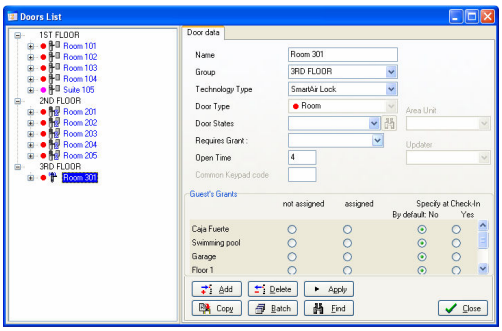
We will click on the YES button.

The next step is to create rooms 302, 303, 304 and 305 of the second floor, which will be identical to the room 301 that we have just created.

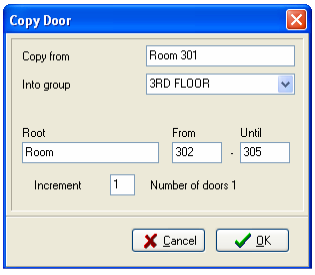
As in the case of the rooms on the first floor, we will use the Copy function.

On the main screen of the INHOVA program, click on the Doors icon and go to the Doors screen of the installation.

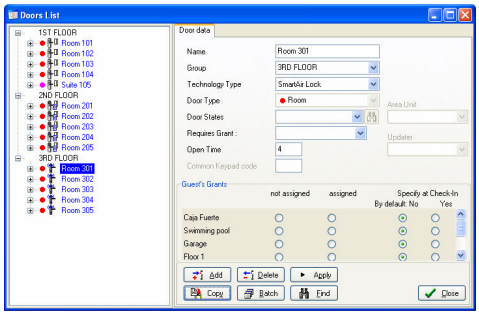
Select the room 301 we have just created, which is the room we want to copy:



Click on the Copy button and go to the next screen:

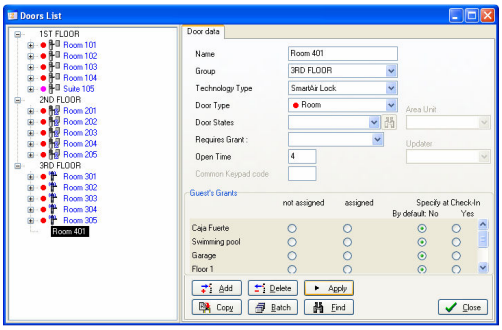


Like in the first floor, we have to copy 4 rooms, 302 to 305 with an increase of 1. If we click on the OK button the rooms will be created automatically:

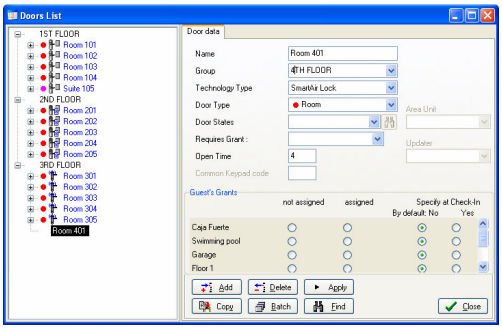


With all this the third floor is finished. Start now creating rooms in FLOOR 4. The process is similar to the previous ones, but in this case the technology type is contact-chip. Define room 401 and copy the room.

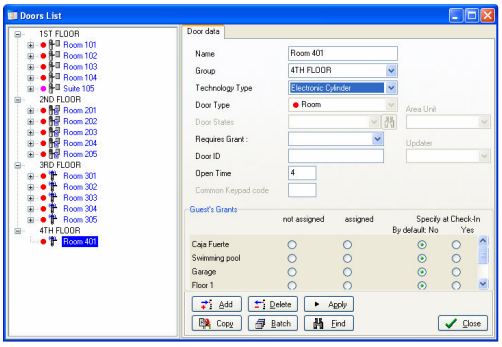
To create room 401 click on Add. Start defining the room by its name: Room 401.



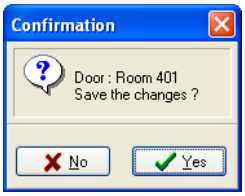
The next field is the group the door belongs to. As we have already mentioned, the group will be the 4TH FLOOR. Accordingly we will write 4TH FLOOR in the field Group:



Next, select *Electronic Cylinder* in technology type. The rest of the features are similar to room 101.



Once we have created room 401, click on the Close button.



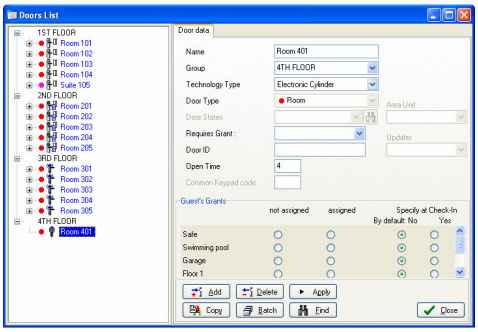
The program will ask us whether we want to save the changes made in room 401 or not. Click on the YES button.

The next step is to create rooms 402, 403, 404 and 405 of the fourth floor, which will be identical to the room 401 that we have just created.

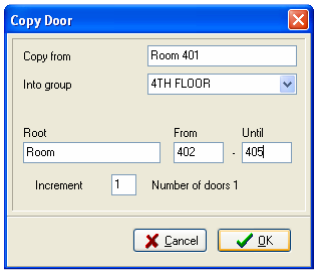
As in the case of the rooms on the first floor, we will use the Copy function.

On the main screen of the INHOVA program we click on the Doors icon and go to the Doors screen of the installation.

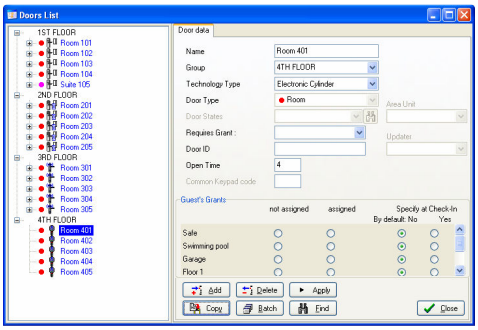
Select the room 401 we have just created, which is the room we want to copy:



Click on the Copy button and go to the next screen:



Like in the first floor, we have to copy 4 rooms, 402 to 405 with an increase of 1. If we click on the OK button the rooms will be automatically created:



With this fourth floor, the creation of all hotel rooms is finished.

Once the rooms are defined, we are going to start creating the rest of the doors of the hotel: Access control doors where only hotel staff has access and common access doors where staff and guest have access.

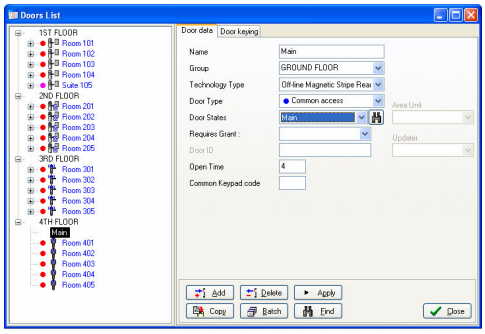
Create hotel common accesses doors. For this, in the doors screen of INHOVA program, click on Add and create the door in a similar way as the rooms. In our example hotel we have the following common accesses doors: Garage, Principal and Swimming pool in FLOOR 0, Corridor 1 in FLOOR 1, Corridor 2 in FLOOR 2, Corridor 3 in FLOOR 3 and Corridor 4 in FLOOR 4.

In our example hotel we have created a special grant for the Garage and another grant for the swimming pool, so when creating the garage we will have to select the Garage grant and for the Swimming pool the Swimming pool Grant. We have also created a special states board for the principal door and other for the corridor, so we have to take this into account when creating the principal door and the corridors.

We are going to create different locks in the common accesses of FLOOR 0 to have the hotel completed.

We will first create the main door. We click on the Add button of the Doors screen of the INHOVA system.

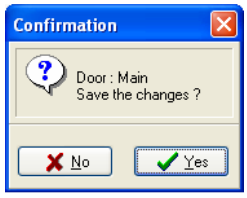
In the field Name we must write the name of the door: Main. In the field Group, we select the group the door will belong to, which in this case is the GROUND FLOOR. We will select the *Off-line Magnetic Stripe Reader* to define it like a wall reader. In the field Type of Door we select *Common Access*. In the field Door States we click on the drop-down list to select one of the state tables we have already created; in this case we must select the *Main Door* table.



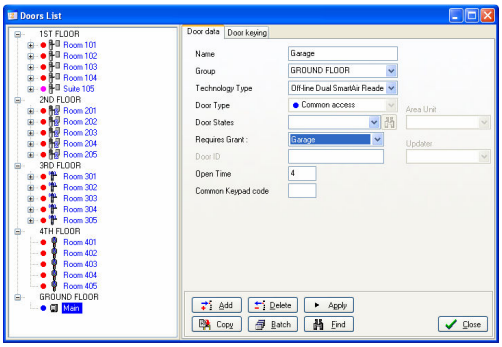
The main door does not require a grant, and hence we will leave the field Grant blank. The opening time will be 4 seconds, and it does not need a common keyboard.

We have finished creating the Main common access door.

To add the next door we click on the Add button and save the changes made:

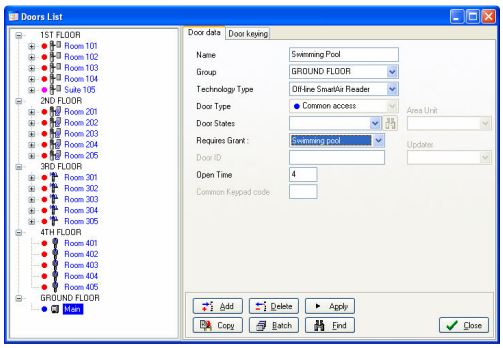


Create the door of the Garage. The only difference with the principal door is the type of door. In this case the type of door is *off-line Dual SmartAir Reader*. It doesn't follow any state board, so it requires the Garage grant created for this door.



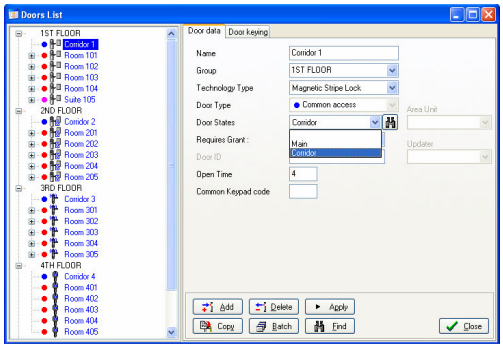
The opening time is 4 seconds, and it does not need a common keyboard.

In the same way we have created the principal door and the garage, we are going to create now the swimming pool. The difference between the Swimming pool door and the garage room is the type of lock. In this case is an *off-line Smartair Reader*, and the grant it requires is, in this case, Swimming pool grant.



To finish, we are going to create common access doors for the rest of the floors.
In FLOOR 1 create the corridor 1 door access, with *Magnetic Stripe lock* technology type.
In the field Door State click in the pull-down menu to select one of the state boards that we have defined previously: In this case, select Corridor Board.

For Corridor 2, 3 and 4 access door the process is similar to the previous one, but we have to select the technology of each floor. For corridor 2 access door we have to select *Smartair Dual lock* technology type, for corridor 3 access door select *Smartair lock* technology type and for corridor 4 access door select *Electronic cylinder* technology type.



Finally, we are going to create access control doors of the hotel: Office and Reception in FLOOR 0, cleaning 1 in FLOOR 1, cleaning 2 in FLOOR 2, cleaning 3 in FLOOR 3 and cleaning 4 in FLOOR 4.

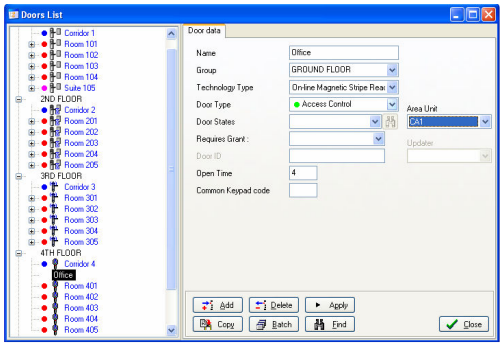
Create Office access control door with *on-line magnetic stripe reader* technology.

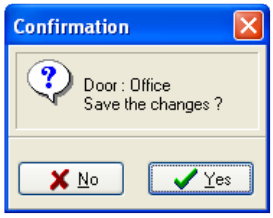
Click on Add and fill the following fields:

Name: Office; Group: FLOOR 0; Technology type: On-line magnetic stripe wall reader; It does not follow any automatic change state board and it does not require any grant. By default, the opening time is 4 seconds (it is possible to modify it) and it does not have a Common Keyboard, as the reader does not have any keyboard.

Cabled doors must be connected to the central unit that has previously been created in Setup menu (See 5.5.2.9).

In this case it will be CA1, as in the following screen:





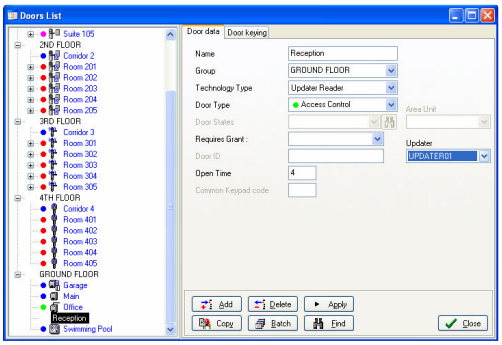
Next, create the Reception access control door with *wall reader updater* technology.

Click "Add" and fill the following fields:

Name: Reception, Group: FLOOR 0; Type of technology: Wall Reader Updater; It does not follow any automatic change state board and it does not require any grant. By default, the opening time is 4 seconds (it is possible to modify it) and it does not have a common Keyboard, as the reader does not have keyboard.

The wall reader updater must be connected to an updater that has previously been created in the Setup menu (See 5.5.2.7).

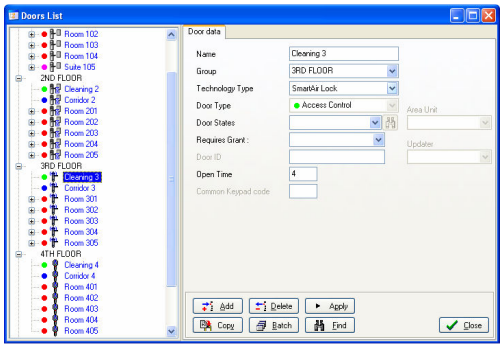
In this case it will be UPDATER01, as in the following screen:



Finally, we create access control doors for the rest of the floors.

In FLOOR 1 create Cleaning 1, with *Magnetic Stripe Lock* technology type. It does not follow any automatic changes state board and it does not require any grant. By default, the opening time is 4 seconds (it is possible to modify it).

Same process for Cleaning 2, Cleaning 3 and Cleaning 4 doors, but changing the type of technology in each floor. In Cleaning 2, the type of technology is *Dual SmartAir Lock,* In Cleaning 3, *SmartAir Lock* and in Cleaning 4, *Electronic cylinder*. Click on "Close" and confirm the changes we have done.



Another type of doors we can create in a hotel are High Transit Doors.

Locks, readers and/or safes can recognise up to 1,500 different users. Therefore, a common access door in a hotel cannot have more than 1,500 users including customers and staff.

In most cases this amount is usually enough. Obviously, it depends on the size of the hotel: number of rooms, staff, etc.

If we want to install an electronic lock or a reader in a door which is going to have over 1,500 users, we would not be able to do it: the lock or reader would not have enough storage capacity to store the information of the closing plan of such a high number of users.

To solve this problem, the INHOVA system offers the possibility to define that door as a "High Transit" door. A high transit lock or reader cannot restrict access to anybody who has a card recorded for that installation. That is, anybody who has a card of that installation will have access to that high transit door.

Before giving access to a user, the lock and/or reader checks the information recorded in the card. When the user inserts her/his card in the lock, the reader reads the information of the card and analyses it:

The System Code: it must be the same as the installation's system code. This way, the magnetic stripe cards that do not belong to the installation will not have access to it.

Activation and Expiration Dates: if the present date and time of the lock's or reader's internal clock is between the activation and expiration dates recorded in the card, the card will be valid.

The User Code: it is used to check whether the user has access to the door according to the closing plan that the lock or reader has stored in its memory. The lock or reader will check whether the user is allowed to access or not: NEVER, ALWAYS or RESTRICTED according to the time zone, and will give her/him access depending on that.

This is how all the locks, readers and/or safes of the system work.

In a high transit door, the lock will only check the first point, e.g. the system code. It will allow to access to all the users who have a card with that code.

Therefore, high transit locks do not restrict access, but they do register all the openings of the door. The lock stores the last 1,000 events in its memory, and can tell us who has opened the door, on which date and at what time.

Unfortunately, these doors allow access even to cards that have expired in the system. For instance, if a customer stays at the hotel for 3 days and takes the card with her/him when leaving, s/he will be able to open

the high transit door with that card. This is logical, as the high transit door only analyses the installation's system code.

There is a solution to this problem. We will see it later in this manual, when talking about the Special Cards of the System.

5.5.3.3- Programming of Common Access Doors

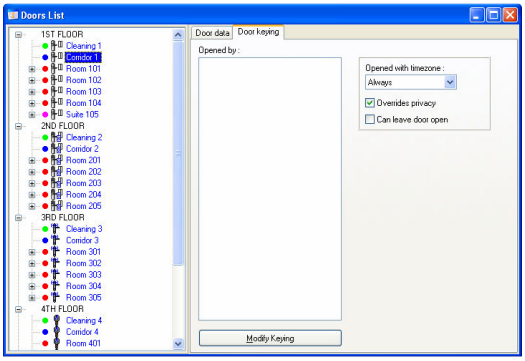
Once we have created the doors of the hotel, we will create the hotel staff (we do not need to define the hotel's customers) and the time zones. Once this is done, we will create a Matrix for each user (of the staff), to determine which doors s/he will have access to and when.

As mentioned earlier in this manual, the customers of the hotel do not appear in the matrix of the closing plan. Therefore, it is not in the matrix where we specify which users (customers) will have access to the common access doors.

When we create the common access doors in the Doors screen of the INHOVA, we will see a new label called "Programming of Doors". In this label we will define which customers will have access to those common access doors. That is, the label "Programming of Doors" is equivalent to the part of the Matrix we must fill in and that it does not appear in the matrix of the system.

PUERTAS / USUARIOS	PUERTA COMUN 1	PUERTA COMUN 2	PUERTA COMUN 3	--	PUERTA COMUN n
CLIENTES HABITACION 1	X	X	X	---	X
CLIENTES HABITACION 2	X	X	X	---	X
CLIENTES HABITACION 3	X	X	X	---	
CLIENTES HABITACION 4	X	X	X	---	
CLIENTES HABITACION 5	X			---	X
--					
--					
--					
--					
CLIENTES HABITACION n	X			---	X

For example, select the common access door "Corridor 1" and click on the label "Door Keying". We will see the following screen:



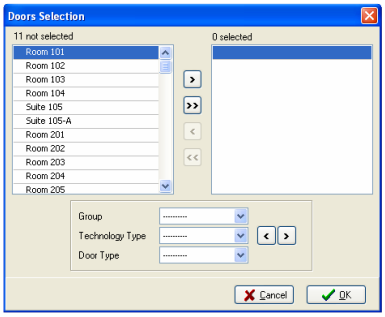
In this screen we will see the field "Opened by"; this shows which customers have access to that common access door.

In the field *Open with time zone*, indicate the time zones in which the customers will have access to the door. As we have not still created any time zone, we will only have two options: Always or Never. When we create a time zone, this zone will appear in the field.

If we select the field “Overrides Privacy”, the customers will be able to open the door even if somebody has locked the door from inside with the locking lever.

If we select the field “Can leave the door open”, the customers who have access to the door will be able to change the operating mode manually from “Open” to “Normal” and/or vice versa.

In our example, the field “Opened by” is blank. This means that customers do not have access to the door. To give access to the customers we must click on the button “Modify Keying”. We will then see the following screen:



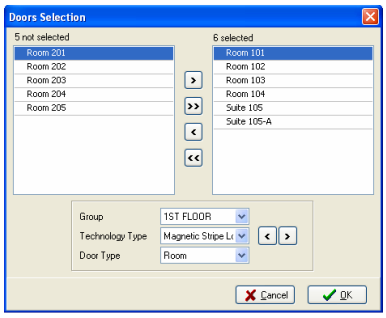
In the screen above, in the column of *Not Selected* doors we have all the rooms of the hotel. This means that guests are not selected and hence none of them is allowed access. We must include the rooms whose guests will have access to the door that we are defining, in this case Corridor 1, in the column of *Selected doors*.

Only the customers in the rooms of the first floor will have access to the doors. Consequently we will select only the rooms in the 1ST FLOOR of the hotel.

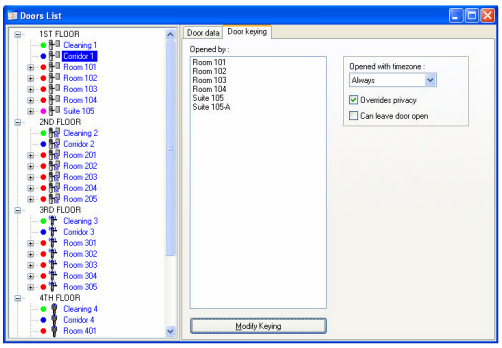
To select the rooms one by one we can use the cursor keys between both columns. If we want to select all the rooms in the 1ST FLOOR we will use the Group 1ST FLOOR.

The system allows also doing selection filters for Technology Type and Door Type.

Whatever method we use, the rooms should be displayed as in the following screen:



We click on OK button and return to the previous screen:



With this we finish the programming of Corridor 1.

We will have to follow the same procedure with all the common access doors of the hotel. We must take into account which customers we want to give access to each door: to all customers in the main door, to the customers in the rooms of the 1ST FLOOR in corridor 1, to the customers in the rooms of the 2ND FLOOR in corridor 2, etc.

In the case of the common access doors that require a grant, such as the GARAGE, we must give access to all the customers of the hotel, regardless of whether they will have access or not. This is what the grant is for. Therefore, all the customers will have access by default; but when they check in, the receptionist will decide whether the customer will have access, giving him/her a grant or not. If a customer in room 101 is not going to have access to the garage, we will not select the GARAGE grant when that customer checks in. If we want the next customer in that room to have access to the garage, we will select the GARAGE grant when that customer checks in. We will follow this procedure with all the hotel's customers.

The same applies to the doors that require a grant.

Once we have programmed the common access doors, the creation process of the hotel's doors will be completed.

5.5.4- Master Cards Menu

In the Master Cards menu of the INHOVADATA program we define all the users of the system who form part of the hotel staff. As we have explained in previous sections, in the INHOVA program we do not have to define the users of the system who will be the hotel's customers.

The INHOVA system allows us to make copies of a staff card. When we define the hotel staff we have two options: define a standard user for each different profile and then create as many copies as people have the same profile. For instance: we can create a card called "Cleaning" with specific characteristics and allowed accesses. We will then make a copy of that card for all the staff of the Cleaning department.

Doing this, we identify all the users in the INHOVA system, and when we pick up the record of the locks´ openings, we will see the events performed by the cards “copy 1”, “copy 2” etc. without identification. If we want to identify them, we must have another record that identifies each copy with its holder.

The best thing to do to identify all the users of the system is to define all of them, even if they have the same characteristics and the same allowed accesses later.

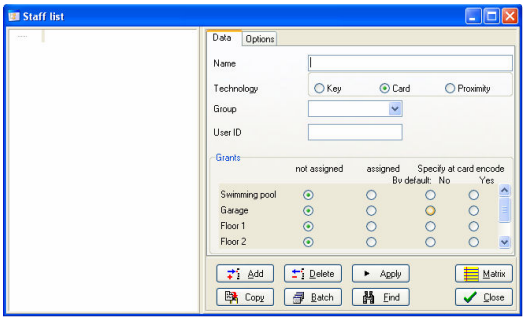
The INHOVA system can manage up to 65,000 users, and each lock can recognise up to 1,500 users. Hence we can say that the system does not have any restriction regarding the number of users.

To continue with our example, let’s suppose that the hotel staff is made up of the following people, divided into the following groups:

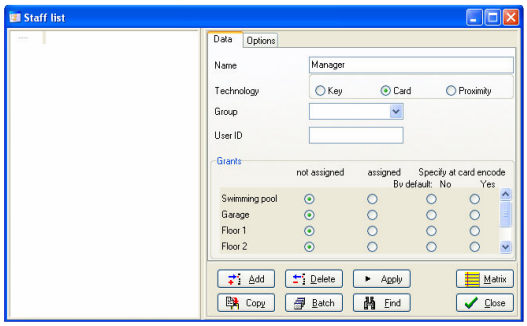
MANAGEMENT
Manager
Secretary
CLEANING
Cleaning 1
Cleaning 2
MAINTENANCE
Maintenance 1
Maintenance 2

In fact, in the INHOVA system we should identify the staff with their names: Manuel Garcia, Fernando Lopez, etc. However, since it is an example, we have used generic names: Cleaning 1, Maintenance 1, etc.

If we click on the Master Cards icon of the main screen of INHOVA, we will see the following screen:

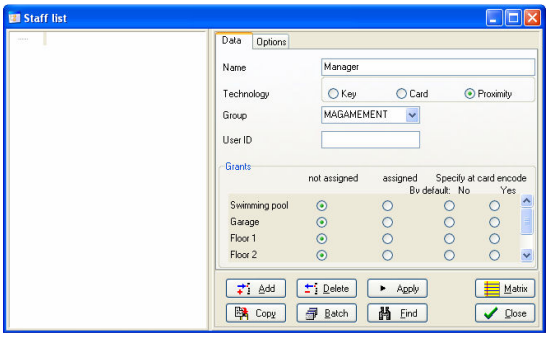


In the field *Name*, we write the name of the user we are going to create. In this case we write “Manager”.

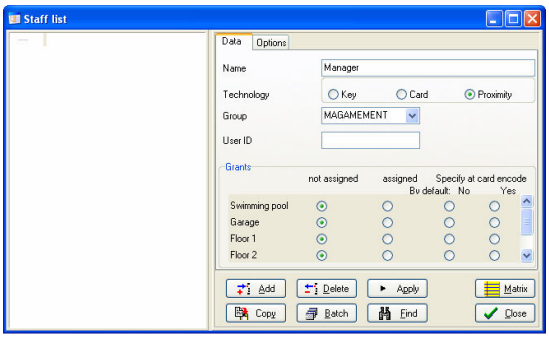


Next, select *technology type* we are going to use in the installation. Depending on the type of installation we have, there will be one or more types of technology. In this case, select option *Card* that corresponds to the electronic locks, wall readers and/or magnetic stripe safes.

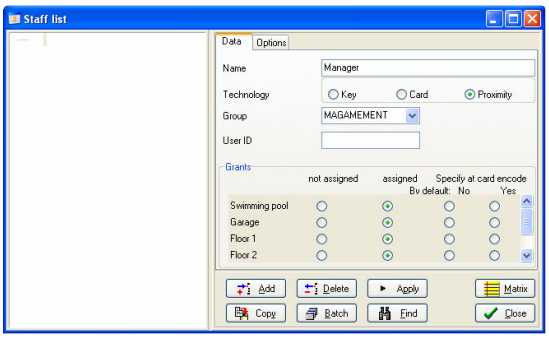
Then, in the *Group* field, we write the name of the group s/he belongs to:



The field *User ID* is an optional field where we can write information about that user.

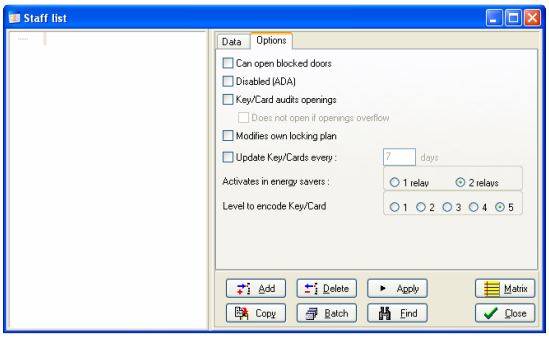


In the field *Grants,* we have four setup possibilities for each grant, in the same way as in the clients case (see 5.5.3.2). In the example, we have six different grants defined in the system: “Floor 1”, “Floor 2”, “Floor 3”, “Floor 4”, “Garage” and “Swimming pool”. Being a Manager, it will have all the grants assigned.



When selecting menu *Options:*

If the field *Can open blocked doors* is selected, the user will be able to open the doors that are locked with the locking card and that s/he has access to. If the field is not selected, the user will be able to open the doors s/he has access to as long as they are not locked with the locking card. The operation of the locking card is explained in detail in the section about the management of the INHOVA system of this manual -see point 6.6-.



To record a card for handicapped people, select *Handicapped (ADA)*. With this option the opening time set up in the doors menu is duplicated –See 5.5.3-. This option is not available for electronic cylinders.

If in Setup menu we have selected option *Update-on-card (read & write)*, user could do the following operations:

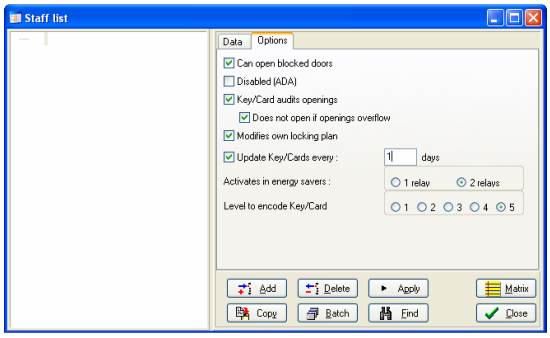
If we activate option *Key/Card audits openings*, user will record in its own card all the events he does in the locks, cylinders or readers.

If we activate option *Does not open if openings overflow*, once the card is full of events, the user will have to empty the card to continue acceding to the doors of its locking plan.

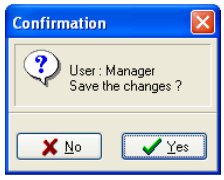
If we activate option *Modifies own locking plan* we will be able to modify locking plan, and activating option *Updates card/key every*, we will be able to update the card. When selecting this option, a new field will appear. In this field we can select how often we want the cards to be updated.

In the field *activates in energy savers,* the system gives us the possibility to activate one or two relays by selecting *1 relay* or *2 relays*. This option is not available with electronic cylinders.

The field *Level to encode key/Card* shows the operator level that the operator who is managing the system must have to record a card or a copy of the user, in this case the Manager. Each operator can record cards of the same or lower level than his access level. For instance, if one of the receptionists is an operator of the system with operator level 3, s/he will not be able to record a card of the Manager, as the operator level of the manager is higher, level 5. Only those operators with operator level 5 will be able to record that card. The operations allowed to each operator level are defined in the label *Operator Levels* of the Setup menu. The users of the system who will be operators of the system are identified in the Operators menu, as it is explained later in this manual.

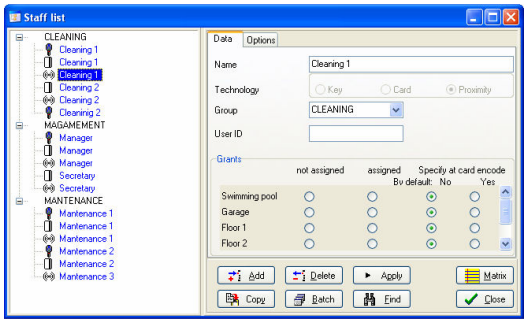


Once we have completed all the fields, we click the Add button, if we want to add another user, or the Close button, if we want to return to the main screen of the INHOVA system.



The system will ask us whether we want to save the changes made in the user Manager or not. Click on the YES button.

Follow the same procedure with all the users we need to create in the system.



With this the creation of the users (staff) of the system is be completed.

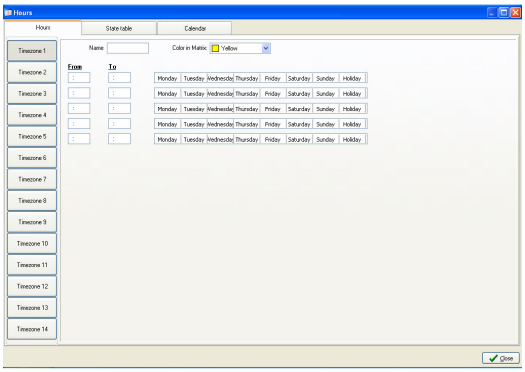
5.5.5- Timetables Menu

INHOVA is a system that manages the users´ access to the different doors of a hotel. It is based on magnetic stripe card electronic locks. One of the characteristics of these locks is that they have a real-time clock and calendar. Thanks to this we can restrict the users´ access to the doors according to the time and/or the day.

We can create up to 14 different time zones in the system, and each can be divided into 5 periods of time.

To create the time zones, we must click on the Timetables icon of the main screen of the INHOVA system.

We will see the following screen:



In this screen we will find three different labels: *Hours* is the default active label when we open the Time zones screen. In this screen we will create the time zones we need for the system. The second label, *States*, has already been used to create the state tables about the automatic changes of the locks. In the third label, *Calendar*, we will define the public holidays in the installation.

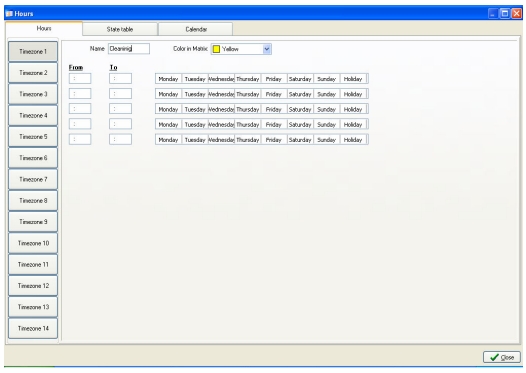
5.5.5.1- Time Zones

Let us suppose that from all the staff only the management and the cleaning department will have access to the rooms. The management will always have access, and the cleaning staff will have access from 6 a.m. to 3 p.m. every day of the week, including public holidays.

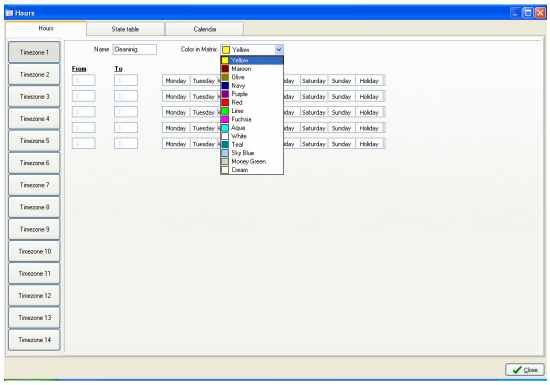
The system has two default time zones that we do not need to create. They are the options ALWAYS and NEVER. ALWAYS means that the user will have access to the doors 24 hours a day. NEVER means that the user will never have access to the doors.

In this case, then, we only have to create a time zone that we will call Cleaning.

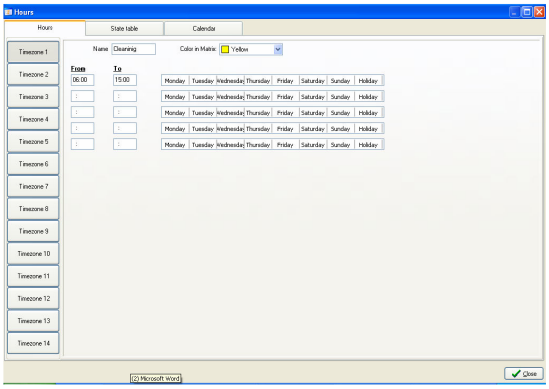
In the field Name we write the word Cleaning:



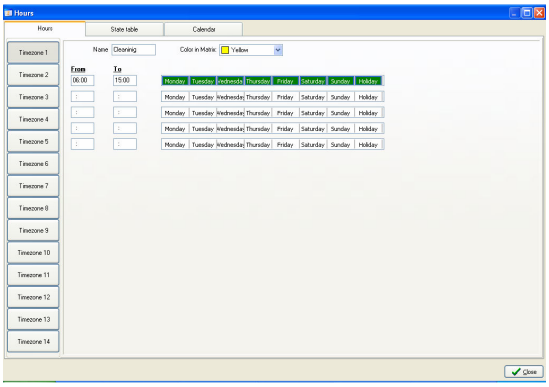
Next in the colour in matrix field, we will select the colour we want in the Cleaning Time zone.



In the field *From* we write the time (in HH:MM format) from which the users will have access; that is, 06:00.
In the field *To* we write the time after which the users will not have access; that is, 15:00.



Finally we will select the days in which the users will have access to the doors between those times. In our example, we would select all of them. To select the days we must double click on each day:

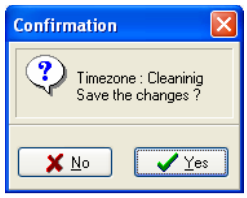


Once we have selected the days, the time zone is defined. In this example we have only used one period of time of the time zone, leaving the other four blank. To create another time zone, we must click on the button Time Zone 2:

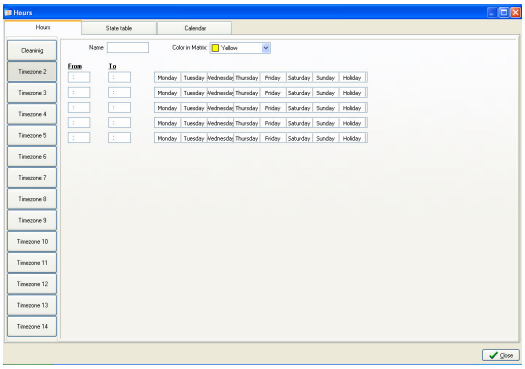
When the time zone is split, we will need more than one period in the same time zone; for instance, from 09H00MN to 14H00MN and from 16H00MN to 22H00MN from Monday to Friday. In this case we must use two periods of the time zone. The same happens when the time zones vary depending on the day of the week, etc.

In addition, each period must be between 00H00MN and 24H00MN of the same day. For example, if a period starts at 20H00MN of one day and finishes at 08H00MN of the following day, we will have to use two periods: one from 20H00MN to 24H00MN of one day and another one from 00H00MN to 08H00MN of the next day.

If we need to create another time zone, we click on Time Zone 2. The program will ask us whether we want to save the changes made in Time Zone 1 or not. Click on YES button.



We will see that the name Time Zone disappears, adopting the name specified in the field Name, that is, Cleaning:



5.5.5.2- State Tables

We have already explained how to create state tables in the Doors menu.

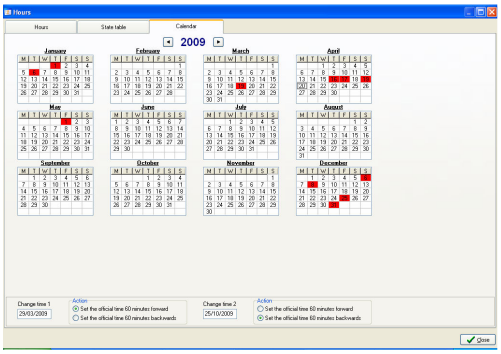
5.5.5.3- Calendar

The clock of the locks, readers and/or safes is set by means of the portable programmer, when we transmit them the information of the closing plan of the door where they are installed. In turn, the portable programmer takes the date and time from the computer from which we are transmitting the data of the installation. Therefore, the date and time of the locks, readers and/or safes is the same as the computer from which we execute the INHOVA program.

This clock and calendar can recognise ALL the days of the week from Monday to Sunday: However, they cannot recognise whether a certain day is a public holiday in the installation.

For this reason, in the INHOVADATA program we must define which days of the year will be public holidays in the installation.

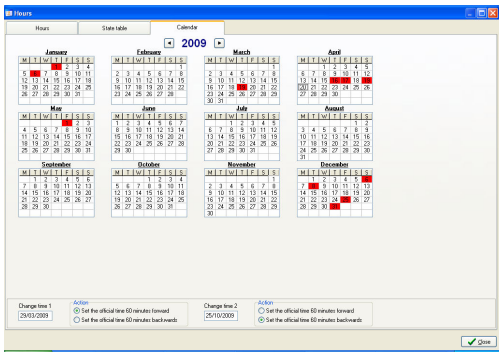
We have a calendar for this purpose. If we click on the Calendar label of the Timetables menu, we will see the following screen:



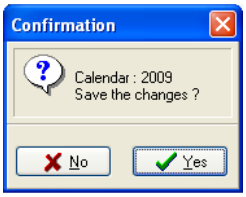
In this calendar we will double click on the days that are public holidays in the installation. They will turn red, as shown in the screen above.

We have to select also which are the days where the DTS or time change from winter to summer or summer to winter happens. It is configured automatically depending on the parameters defined in the system.

It is possible to see in the menu the dates and time changes that are going to happen in the system. See the following screen:



The calendar for the year 2005 will thus be completely defined. We click on the Close button to leave the Timetables menu and return to the main screen of the INHOVA system. The program will ask us whether we want to save the changes made in the calendar of 2005, and we must click on the YES button.



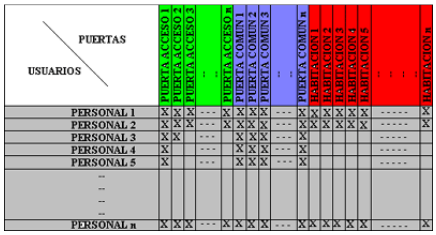
The INHOVA program allows us to create public holiday calendars for several years.

5.5.6- Matrix

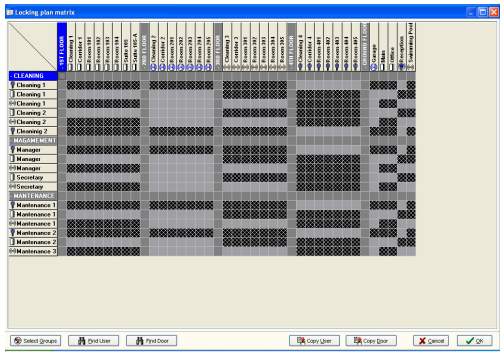
So far, in the hotel closing plan, we have defined where we are going to install the locks and readers, the safes that we have, the hotel staff and the time zones we are going to use to restrict access. But we still have not specified which user of the system will have access to each door and when, that is, in which time zone.

This information is specified in the matrix. As we have mentioned in this manual, in the INHOVA System we only define the hotel staff, not the customers. We have already dealt with the customers: each guest has access to her/his room and to the rooms that we have defined when programming the common access doors.

Therefore, what we must do next is complete the matrix of the staff's access to the doors, that is, the generic matrix that we can see in the following illustration:



If we click on the Matrix icon of the main screen of the INHOVA program, we will see this matrix (which will be built according to the doors and users that we have created in the system):



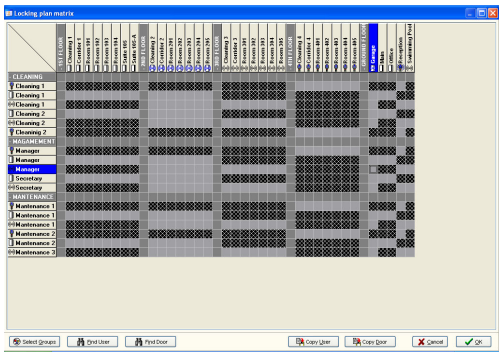
In this matrix all the users are divided into groups in a vertical column, and all the doors are divided into groups in a horizontal column. The groups of users and doors are those we have defined when we were creating the users and doors.

In each crossing between the users and the doors of the matrix, we indicate whether that user is allowed access to the doors or not, and if s/he is, when s/he will have access. In other words, depending on the time zone.

By default, when we open the matrix for the first time users do not have access to any door. When a user NEVER has access to a door, the crossing in the matrix is shown GREY. When a user ALWAYS has access, the crossing is shown GREEN. When the user is allowed to access but this access is restricted to the time zones created in the system, the crossing will be shown YELLOW.

Therefore, when we want to give each user access to each door, we will have to do it door by door.

First we select the crossing that we are going to modify. In this example, select the user Manager and the Garage door:



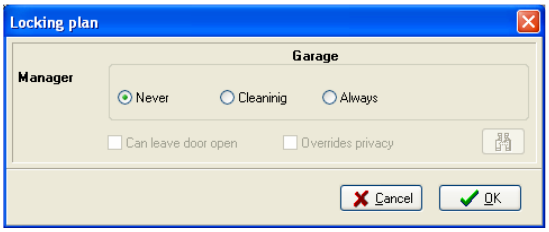
We must bear I mind that the Garage door requires a GARAGE grant. With the GARAGE grant we can decide whether a user will have access to the garage when we record her/his card by selecting this grant or not. For the user to have access, the matrix must also include this grant, either always or according to a time zone.

That is, if a user has a grant, s/he will follow the instructions of the matrix. If s/he does not have a grant, s/he will not have access, even if the matrix shows that s/he has a grant.

For this reason, the best option for a door with a grant is to allow access first and then allow or deny access with the grant in the card.

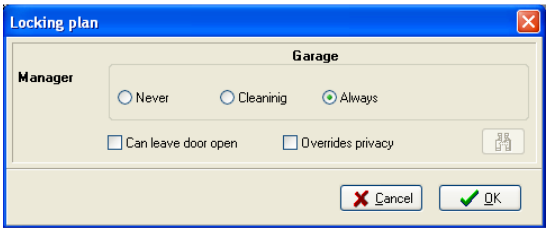
Regardless of the grant, the operations to carry out in the matrix are identical for all doors and users. We must proceed in the following way:

By double clicking on the selected crossing, we will see the following dialog box:



In this box we will see two default options of the system, NEVER and ALWAYS, as well as the time zones that we have created in the system's Timetables menu. In this case, we will only see one time zone (Cleaning) because we have only created one time zone. If we had created more time zones we would see all of them.

As the user is the manager, we select ALWAYS:



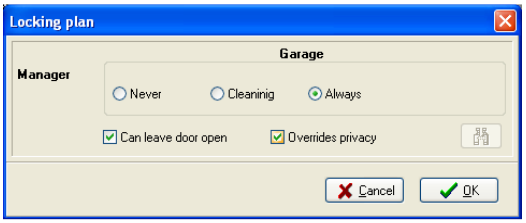
When we give a user access to a door, being it ALWAYS or according to one of the established time zones, two options are activated: *Can leave the door open* and *Overrides privacy*.

Can leave the door open: if we select this option, the user will be able to modify the state of that door manually from Open to Normal or vice versa. For instance, if the door automatically changes to the Open mode every day at 08H00MN, the user will be able to change the mode to Normal by inserting the card in the lock two consecutive times. The user can also follow the opposite procedure.

Two conditions must be met for this to happen: first of all, the user must be able to do this, that is, s/he must have the option *Can leave the door open* selected. Secondly, the lock must allow that manual change. Therefore the option Can be left Open or Closed must be selected in the state table. In addition, if a door does not follow any state table, it will always operate in the Normal mode and will allow the user to change the mode from Normal to Open or vice versa manually, except the rooms, which never allow that change.

Overrides privacy: if a user has selected this option, s/he will be able to open the door even if it is mechanically locked from inside with the lever. If the user does not have this option, s/he will be able to open the door as long as the door is not mechanically locked from inside. This is a very useful option for the cleaning staff: if the guest is inside the room and has locked the door with the lever, the cleaning staff will not be able to open that door until the guest unlocks it.

The Manager in our example will have both options in the Garage door:



To finish with the operation, we click on the OK button and return to the main screen of the matrix. There we will see that the crossing Manager / Garage has changed: it is now shown green and with the "0" symbol, which means that the option *Can leave the door open* is selected, and the "+" symbol, which means that the option Overrides privacy is selected.

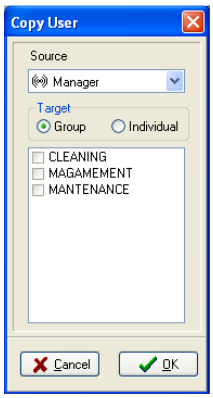
With this we finish the modification of the crossing Manager / Garage. We must follow the same procedure with all the crossings of the users and doors.

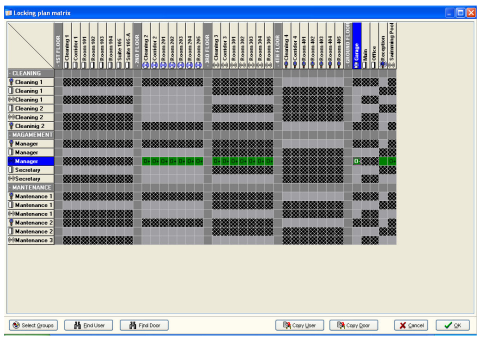
Nevertheless, filling in the matrix crossing by crossing can be quite tiresome. We can use two tools to make it easier: *Copy User* and *Copy Door*.

Copy User

The option *Copy User* consists in copying the closing plan of a user (the horizontal line of the matrix is the information about users) to other users or groups of users. We will see how to do this step by step.

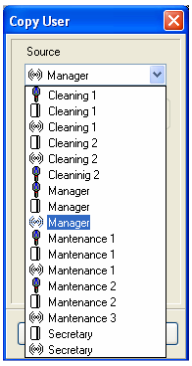
Let us suppose that we want to copy the closing plan of the Manager to the Secretary and Receptionist 1. We will see the closing plan of the Manager in the matrix:



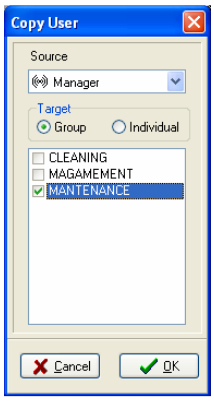


If we click on the button Copy User we will see the following screen:

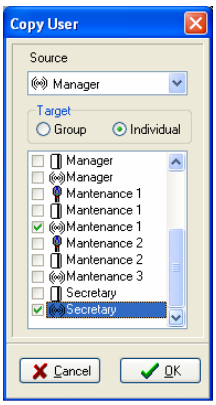
The screen has two fields: the Source, which is the name of the user we want to copy the closing plan from, and the Target, which is the user or group of users we want to copy that closing plan for.



By default, the source is the user that is selected in the matrix. This can be modified. If we click on the arrow of the Source field, we will see the drop-down list of all the users of the system. From that list we can select the user that we want:



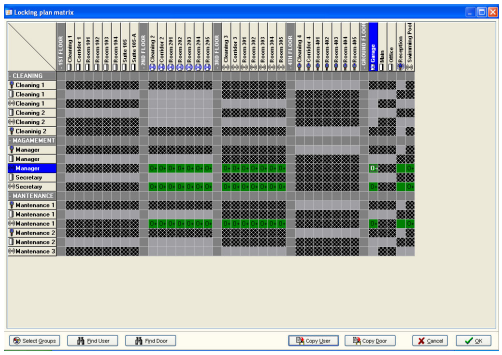
The Target can be a whole group of users:



Or users selected individually, independently of their group. For this, select individual option, and we will see the list of all the users of the system. We can select as many users as we want:

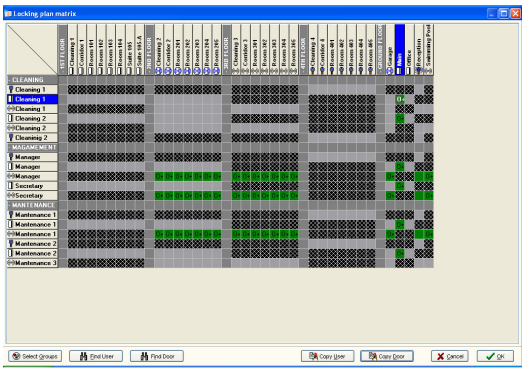
In the example, we select the Secretary and the Maintenance 1, as in the following screen:

To finish click OK and the selected users in field *Target* will automatically have the same locking plan as the user we have selected in field Source. See the following screen:

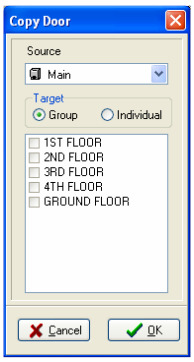


Another useful tool of the matrix is the option *Copy Door*. With the option *Copy User*, we copy the horizontal lines of the matrix. In this case, we copy the vertical lines. That is, we will copy the closing plan of a door to other doors of the installation.

Let us suppose that we want to copy the closing plan of the Main door to the doors of Corridor 1, Corridor 2, Corridor 3 and Corridor 4:

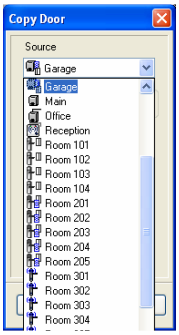


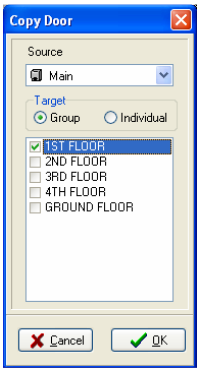
If we click on the *Copy Door* button we will see the following screen:



We have two fields: *Source*, that is, the door we want to copy, and *Destiny*, that is, the group of doors we want to define.

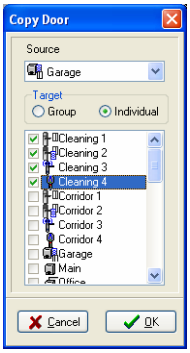
By default, the *Source* field will show the door we have selected in the matrix. This can be modified by clicking on the arrow of the Source field. We will see a drop-down list with all the doors of the installation, and we will select the one we want to copy (*Source*):



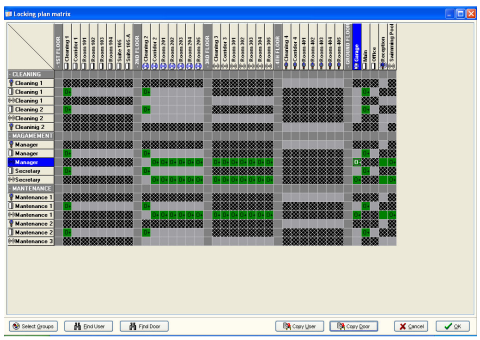


In the *Target* field we have two options: according to a group of doors or individually. If we want all the doors in a group to have the same closing plan as the Source door, we will select that group and click on the OK button to copy it:

If we want to do this individually, we must select the option *Individual*. Then we will see a list with all the doors of the installation. In that list we will select the doors we want. In our example we are going to select doors of Corridor 1, Corridor 2 and Corridor 3:

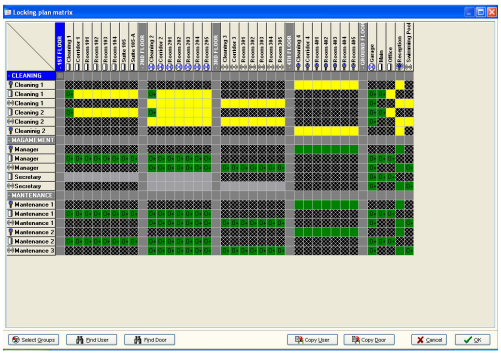


Then we click on the OK button and return to the main screen of the matrix:



We must be very careful when we perform the operation Copy Door because we could modify the closing plan of a user by mistake. We must bear in mind that ALL the vertical line of the door selected as Source will be copied.

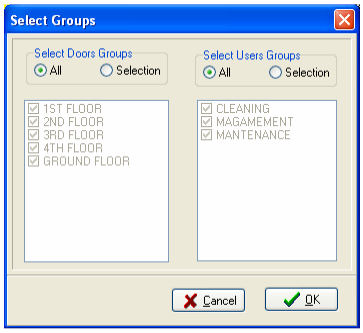
As explained, we are going to create the matrix of the hotel staff, either user by user or using the options *Copy User* or *Copy Door*.



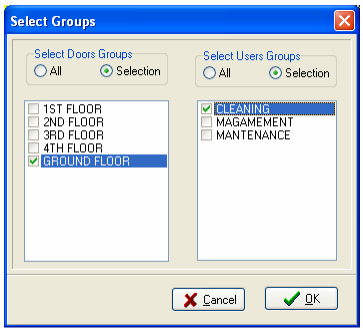
See Groups and *Search User* are another two options of the matrix.

We can use the option *See Groups* when the matrix of the hotel is too big to display it in the screen. With this option we will be able to see the groups of users and doors that we choose.

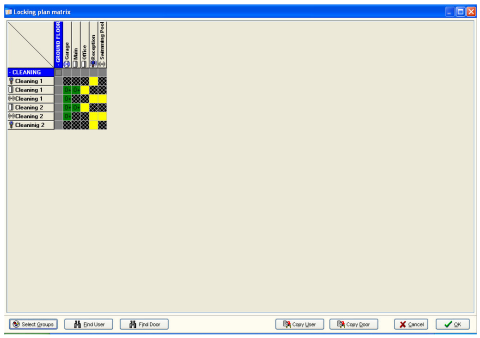
If we click on the button *See Groups*, we will see the following screen:



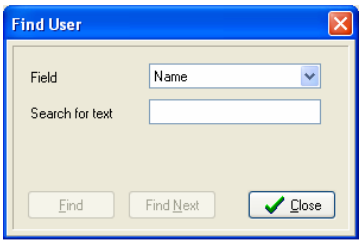
The groups of users and doors are selected by default, and this is why we see the whole matrix. If we only want to see certain groups of users and doors, we must select the option *Selection* for the users and the doors, as shown in the screen below:



If we click on the OK button, the matrix will only show the groups we have selected:



We can use the option *Search Users* when the number of users is so high that finding a specific user is difficult. If we click on the button *Search Users* we will see a dialog box, where we can write part of the name of the user we want to find:



If we click on the *Search* button, the program will show a user whose name contains the word we have written. If that is not the user we want to find, we click on *Search* again; the program will show us the next user whose name contains that word. We will carry on doing this until we find the user we want.

5.5.7- Operators

An operator of the system is a user of the system who will have access to its management software. An operator of the system must always be a user of the system; that is, the operator must be in the list of users of the system.

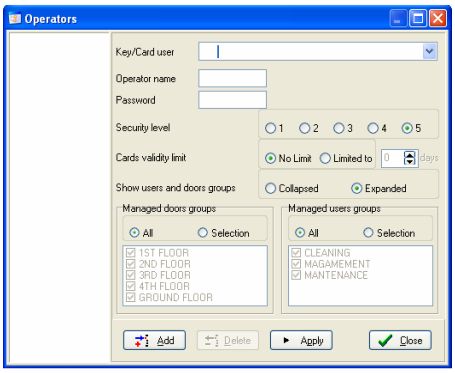
In all hotels part of the staff are in charge of managing the system; for instance, the receptionists who record the cards of the hotel's guests, the office staff, the manager etc.

Each operator has her/his own access code (or Operator Name) and password. In addition, each operator will have a certain operator level.

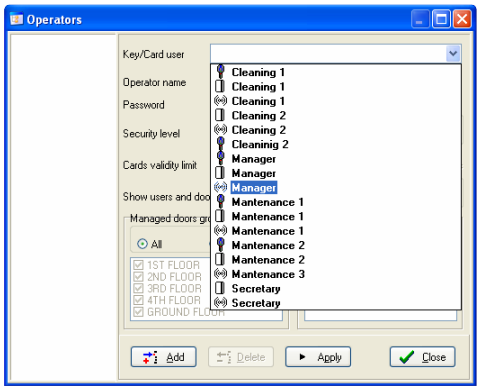
The security levels to access the software are established in the Setup menu, which is explained earlier in this manual.

Therefore, what we must do now is register all the operators we want to have in the system.

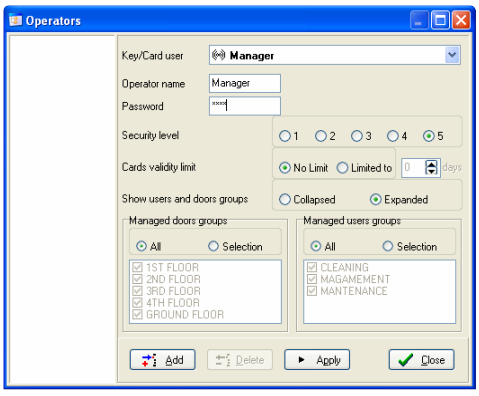
To do this we click on the Operators icon of the main screen of the INHOVA system. We will see a screen like the following:



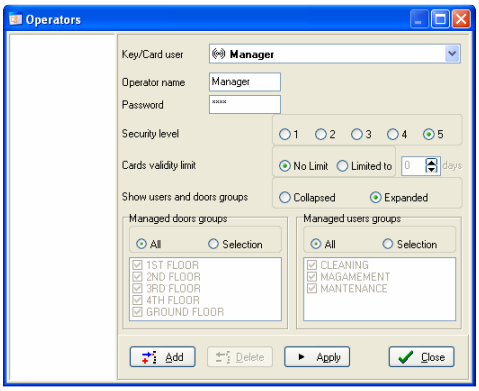
To create an operator we must first select the user of the system that we want to register as an operator. If we click on the arrow of the field *Card User* we will see the list of the users of the system that are not operators yet. A user can only have one access code; therefore, when a user has been registered as an operator, s/he will not appear in this list any longer, unless we eliminate that operator and want to create it again. The list is shown below:



Once we have selected the user we want to register as an operator, we write the *Operator Name* and *Password* for that operator. The *User Name* does not necessarily have to be the same as the Operator Name. The password is an alphanumeric code of between 1 and 6 characters.

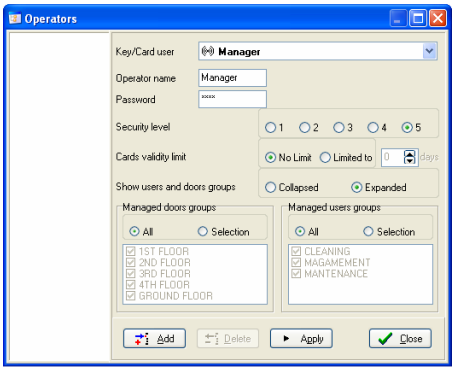


The next step is to select the security level of that operator to access the software. As mentioned earlier, there are 5 levels of access. Each one determines the operations the operator is allowed to do; level 1 is the lowest (the one with most restrictions) and level 5 the highest.

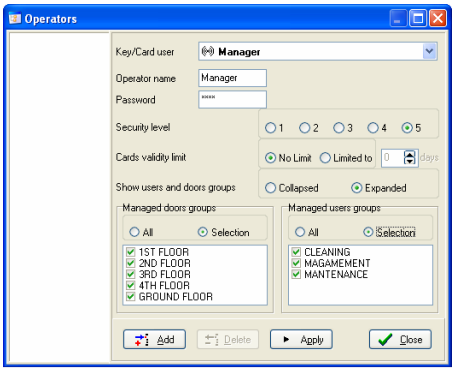


In the field *Cards Validity Limit*, we can encode cards without limit or limited to a number of days. It is a very useful function when the hotel works for seasons. In this case, we are defining the Manager so choose the *No Limit* option.

In the field *See Groups of Users and Doors*: *Contracted or Expanded* we choose the way in which the operator will see the matrix when s/he opens it. If we choose the option *Contracted* the operator will see the matrix with all the groups of users and doors contracted; if we choose *Expanded* these groups will be shown expanded.



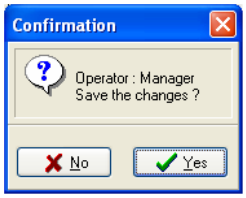
Finally, we will see the fields *Manage groups of Doors* and *Manage Groups of Users*. In these fields we will determine whether the operator will have access to all the groups of users and doors or only to some of them.



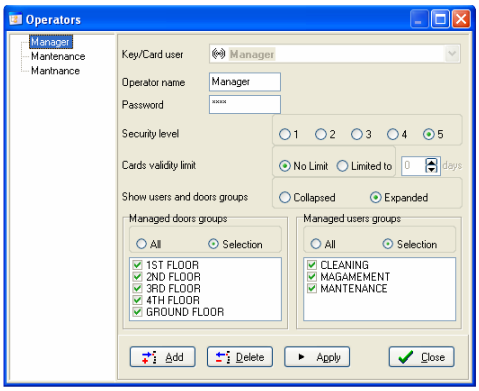
The last option is very useful if the hotel is made up of different buildings with a reception in each. If we define the groups of users and doors of the system following the criteria of the buildings, we can make a receptionist of each building to manage the groups of users and doors of that building only. We can do the same thing with the receptionists of all the buildings. Naturally, the management team will have access to all the buildings.

With this we finish creating the operators of the system. If we want to create another operator we must click on the Add button; otherwise click on the Close button.

In both cases the system will ask us whether we want to save the changes made or not. Click on the YES button.

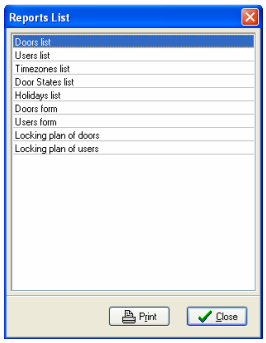


Once we have created the operators, they will be shown in the left column of the operators' screen:



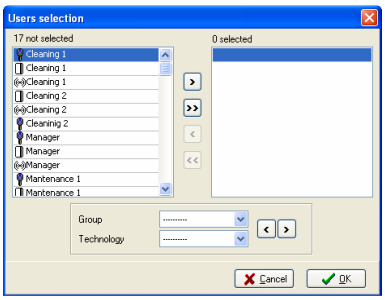
5.5.8- Reports

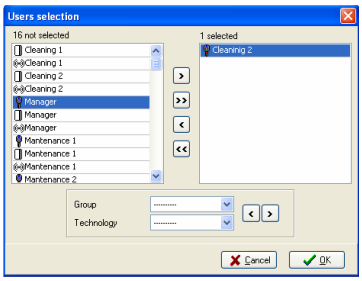
In the Reports menu we can print all the information of our closing plan or save it in a text file. If we click on the Reports icon of the main screen of INHOVA, we will see the following screen:



We can print the whole list of the users of the system, the doors, the users´ records, the closing plans, etc.

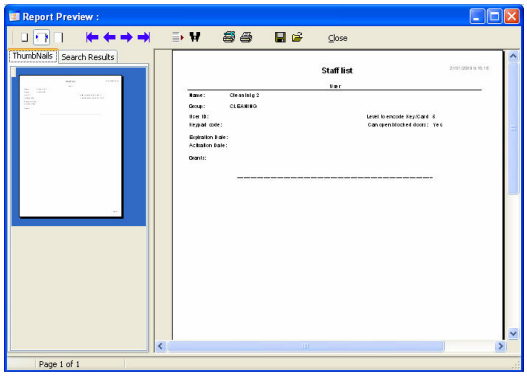
The procedure is similar in all cases. Let us suppose that we want to print the record of a particular user. From the *Options* list we select the option *Users´ Record* and click on the *Print* button. We will see a screen like the following:



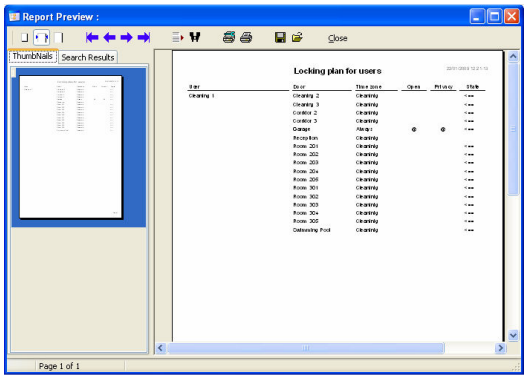


In this screen we can select the users individually or by groups, using the field *Group*. We select the user Page 1:

Once the user Page1 is selected, we click on the OK button. We will see the record of this Page, as in the screen below:



Next, leak the *user locking Plan*, and the following menu will appear:



The *State* column of the report, informs us about the state of the locking plan information of each user. For a master with magnetic stripe technology, proximity technology and emergency cylinder, if the column is empty, it means that the door has already been updated with the last information of its locking plan and that this information has already been confirmed by INHOVA software.

If an arrow appears pointing at the right, it means that the last version of the user's locking plan is pending of being recorded in the card/key in the UoC system. In the rest of the systems this arrow means that there is pending information to be transmitted to the portable programmer. If an arrow appears pointing at the left, it means that the last version of the user's locking plan has already been recorded in the card/key in the UoC system. In the rest of the systems this arrow means that the information has already been transmitted to the portable programmer, but this is still pending of being confirmed by INHOVA software.

Is a useful tool to know the state of the locking plan in the UoC (Update on-Card/Read and Write) systems.

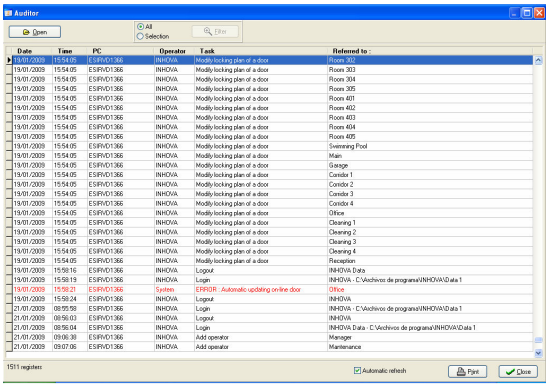
The record can be printed in the default printer of the computer, or saved in a text file.

Follow the same procedure with the other options.

5.5.9- Auditor

The auditor is a file that stores all the operations performed by the operators in the system. This means that we can always check the operations performed and who has performed them.

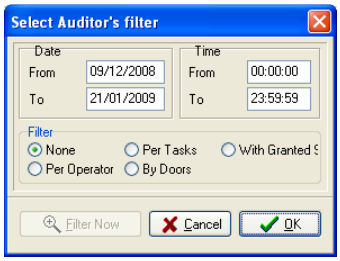
If we click on the Auditor icon of the main screen of the INHOVA system, we will see the following screen:



The field *Date* shows us the day in which the operation was performed. The field *Time* shows the time, the field *PC* shows the name of the computer from which the operation was performed (this is useful when the system is working in a computer network). The field *Operator* shows the name of the operator who performed the operation, and the field *Operation* shows which operation was performed. Finally, the field *Concerning* shows in which user or door the operation was performed.

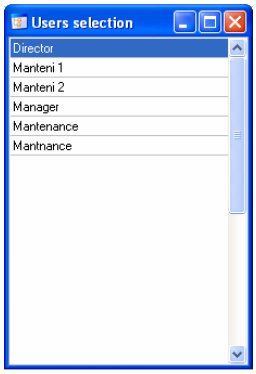
The information stored is quite comprehensive; this means that we can control the operations performed by the operators at any time.

We can also use filters to obtain the information that we want more easily. If we click on the Filter button we will see the following screen:

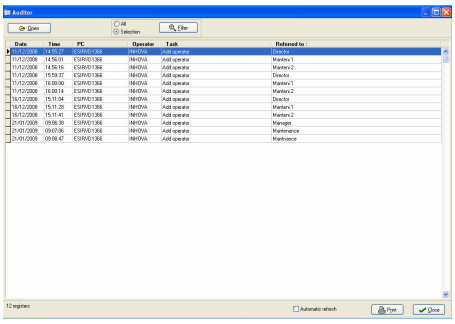


In this screen we can select whether we want to see the auditor of a particular operator, a particular operation or the auditor of the safes in the system.

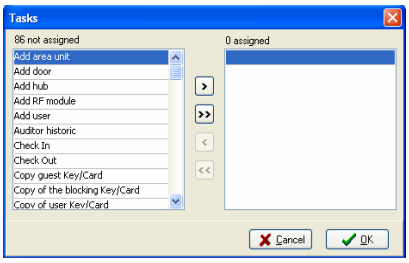
If we select *By Operator*, we will see the list of operators of the system, as in the screen below. In this screen we will double click on the operator whose auditor we want to see.



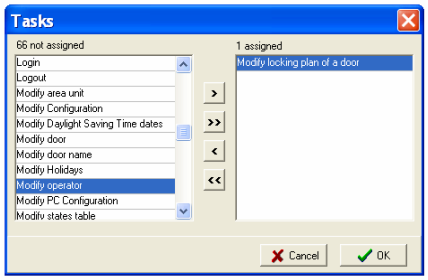
Once we have selected the operator, we click on the OK button. We will see the auditor of the selected operator:



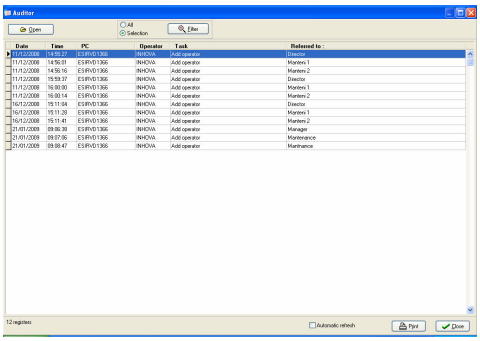
If we select *Per Tasks* we will see the following screen:



In the left column of this screen (Not selected) we can see all the operations an operator can perform in the system. From these operations we will select (move to the right column) the operation or operations that we want to see. For instance, we can select *Modify* the closing plan of a door.

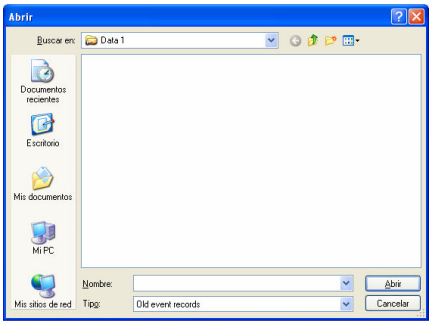


If we click on the OK button, we will see the auditor of that operation:

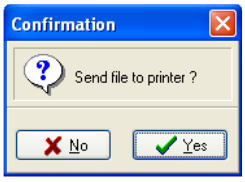


This option is very useful to create a Filter of the operations on the Safes of the hotel. The INHOVA system offers this option because safes are a "sensitive" point regarding security. In this filter we will select an operator and see all the operations performed by that operator in the safes of the hotel.

We can use the *Open* option in the auditor menu to have access to any files in our computer:



Finally, we can print the Auditor file. If we click on the Print button, the system will ask us to confirm that we want to print it:



If we click on YES button, the Auditor file will be sent to the default printer of the computer where we are executing the system.

5.5.10- Logout / Login

The Logout icon is used to deactivate operators. When we click on this icon, the system gets locked and does not allow the operator to perform any operation.

Logout will then be the only active icon, and it will be called *Login*. To reactivate the system we must click on the Login icon and enter the user code and the operator password.

5.5.11- Exit

If we click on the Exit icon we will close the INHOVADATA program.

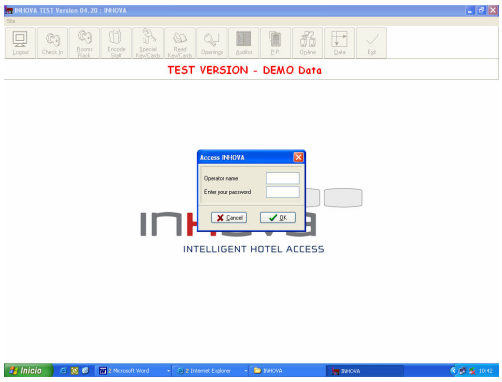
5.6- TRANSMITTING DATA TO THE PORTABLE PROGRAMMER: INHOVA.EXE PROGRAM

Once we have programmed the closing plan of the hotel, we must transmit that information to all the locks, readers and/or safes installed in the hotel.

This access management system is completely autonomous. Since there is not a direct connection between the computer and the locks, we need to use a portable programmer.

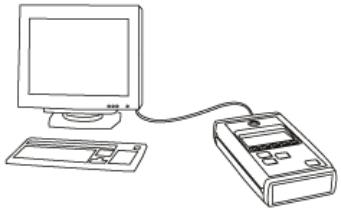
Using the portable programmer, we will transmit the information of the closing plan to the locks. Before we do this, however, we must transmit the closing plan from the computer to the portable programmer.

The transmission of the closing plan from the computer to the portable programmer is carried out by means of the INHOVA.EXE program. Therefore, the first thing to do is to execute the program. The program will ask us to enter the operator name and password:

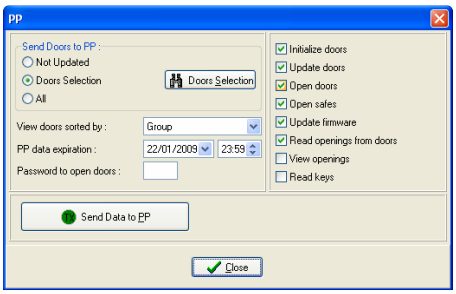


Once we have entered the operator name and password, we will access the i-TEC management software.

To transmit the information from the computer to the portable programmer, we must connect the programmer to the computer with the computer's RS-232 series port. For more information see the MANUAL OF THE PORTABLE PROGRAMMER.



Once they are connected, we click on the PP icon of the main screen of the INHOVA program. We will see the following screen:



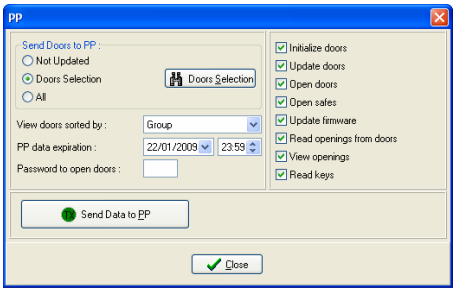
From that screen we will transmit the information of the closing plan to the portable programmer. Before transmitting it, however, we must specify the information of the doors that we are going to transmit. There are two ways of doing this.

The first option is to transmit the information of the doors that have not been updated. That is, to select the *Not updated* option of the screen. For the INHOVA program, not updated doors are doors whose closing plan has been changed, when these changes have not been sent to the portable programmer for their transmission to the locks, readers and/or safes.

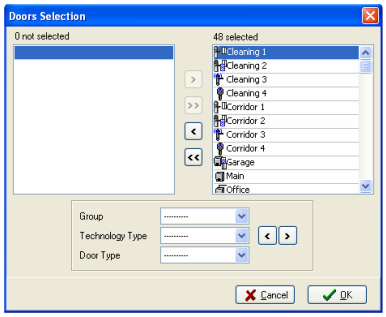
Naturally, if the closing plan has just been created all the doors of the hotel will be not updated; consequently we will transmit the information of all the doors.

The second option is to manually select the doors whose information we want to transmit. This way, if we have changed the closing plan of one door, it will not be necessary to transmit the closing plan of ALL the doors in the hotel. We will only select that door.

We select the option *Door Selection* of the screen of the portable programmer. The button *Doors Selection* will be activated automatically:



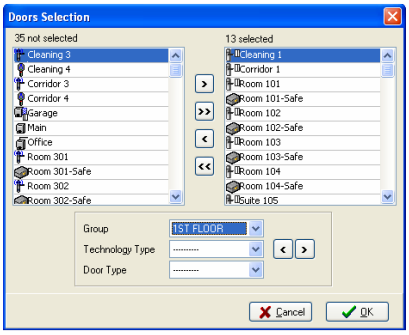
If we click on the button *Selection of Doors* we will see the following screen:



In this screen we can see two columns: one for NOT selected doors (left) and one for selected doors (right). In our example the closing plan has just been created; as a result, all the doors are selected for the transmission of information to the portable programmer. We must, then, leave the doors whose information we want to transmit in the column of selected doors.

It is also possible to select the doors by group, selecting *Group*, by technology type, selecting *Technology type* or by door type, selecting *Door type*, in the same way as it appears in the Doors Selection menu.

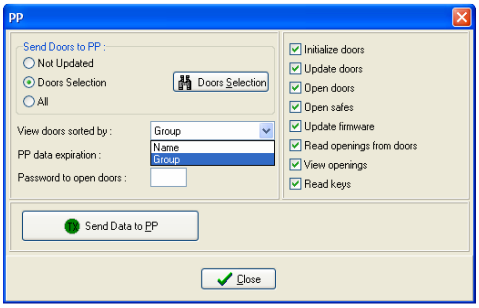
If we filter by *Group* and we choose FLOOR 1, we will select the doors of floor 1, as in the following screen.



The program will automatically select the doors that belong to that group.

When we have finished the selection, we click on the OK button and return to the screen of the portable programmer.

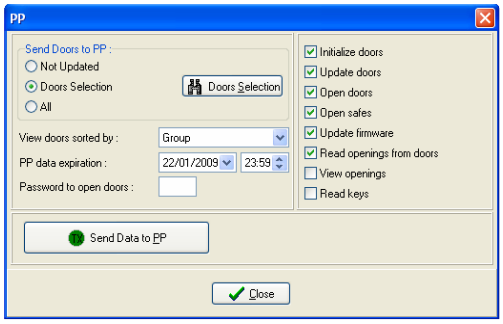
We can also select the way in which we want to see the list of doors transmitted to the portable programmer. We can arrange the doors in alphabetical order or sort them by groups. We can select either of the options in the field *View doors sorted by* of PP screen:



In order to improve the security level using the portable programmer, it is possible to set up date and time in the PP date expiration field to expire the using time of the portable programmer.

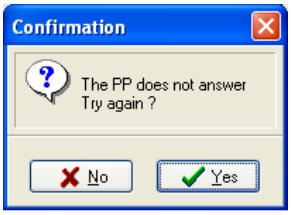
Besides, we can define a code in the *Password to open doors* field to protect the portable programmer. When the portable programmer user selects the *open* option, the portable programmer will ask for the password (see the PORTABLE PROGRAMMER MANUAL). In that way, we can restrict the access to the open option of the portable programmer.

Just as we have mentioned in the 5.5.7 chapter, each operator remains defined with an access security level. As we can see in the following picture, the available options to manage the portable programmer will change depending on the security level of the operator.



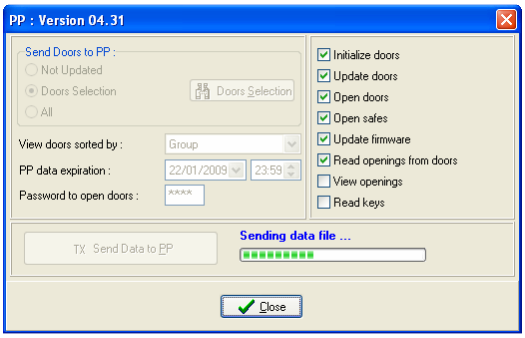
We can now transmit the data to the portable programmer. We must click on the button *Send Data to the PP*. The portable programmer must be connected to the computer and switched on for the transmission to be successful.

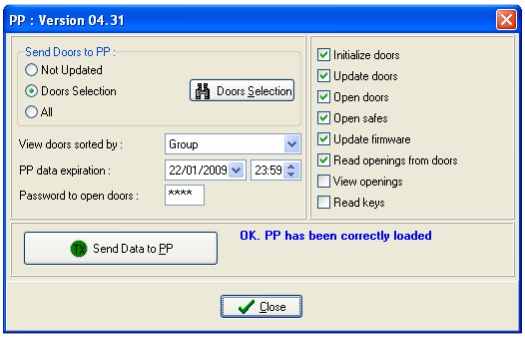
If the portable programmer is switched off, press the ON/OFF button of the programmer. If it is switched off, we will see a message stating that the programmer is not responding:



If this message is displayed when the portable programmer is switched on, this means that the computer cannot communicate with the PP. We must check the connection of the computer's series port; the computer could be using a different COM port from the one you have selected in the Setup screen of the INHOVA program. For more information get in touch with your distributor.

If the connection is correct, when we click on the button *Send Data to the PP* the INHOVA program will create the files needed for the transmission and start transmitting the information. When the transmission is finished, we will see a message stating that the information has been transmitted correctly:





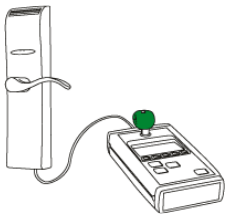
The information of the closing plan or the modifications are always transmitted in the way we have explained.

5.7- INITIALISING THE LOCKS, READERS, CYLINDERS AND/OR SAFES.

Once we have the information of the closing plan of the hotel in the portable programmer, we must transmit that information to each lock, reader and/or safe of the hotel.

Since they are supplied in the initial state, the locks are already installed in the doors.

With the portable programmer we can carry out several operations in the locks. The operation we explain in this section is the Initialisation of the locks. That is, we must transmit the information of the installation the lock belongs to and the information of the closing plan of the door where it is installed.



We must connect the portable programmer to the lock and insert the AUTHORISATION KEY of the hotel in the portable programmer, only in the case that the system demands it. The AUTHORISATION KEY is the green key in the folder that your distributor has given you, which includes the authorisation key and the installation disks of the software.

For more information on the initialisation process of the locks see the MANUAL OF THE PORTABLE PROGRAMMER.

With the initialisation of the locks, readers and/or safes we finish the configuration of the system.

6- MANAGING THE MAGNETIC INSTALLATION: INHOVA.EXE PROGRAM

Once we have finished setting up the system, we can start to use and manage it. As explained earlier, the INHOVA system has two programs: INHOVADATA to program the closing plan and INHOVA to manage it. In section 5 of this manual we have seen how to create the closing plan with the INHOVADATA program. Now we will see how the system is used and managed with the INHOVA program.

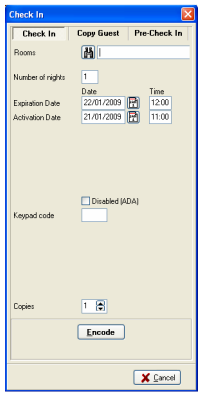
As we have seen, we open the program by entering our Operator Name and Password. Depending on our operator level, we will be able to carry out some or all the possible operations in the system.

If we have operator level 5, for instance, we will be able to perform all the operations and see them in detail.

The program contains a task bar with some icons about all the operations that we can perform. We will explain them one by one.

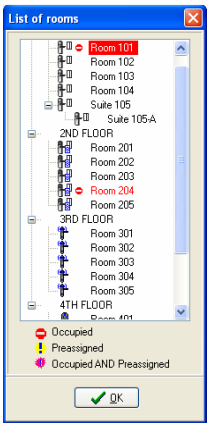
6.1- CHECK IN

Check In consists in giving a room to a new customer arriving at the hotel and recording that customer's card. The card will have an expiration date, which is the date the customer leaves the hotel.

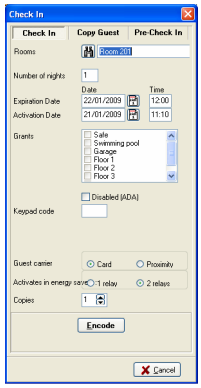


Let us see the process step by step.

If we click on the *Check In* icon of the main screen of the INHOVA program we will see the following screen:



The first thing we must do is see which rooms are available in the hotel; to do this we click on the Binoculars icon of the *Rooms* field. We will then see a list of the hotel's rooms. The rooms that are NOT available will be shown red, and the ones available black.



From this list of available rooms we must select the room we want to give to the new customer. The name of that room will automatically appear in the *Rooms* field of the Check In screen.

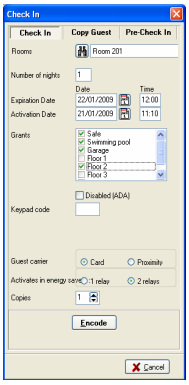
In the following field indicate the number of nights the guest is going to stay in the hotel. It appears number 1 by default.

The *Expiration Date* is activated automatically according to the number of nights selected. 12:00 is the default expiration time of the INHOVADATA program. Remember that in the *General* label of the *Setup* menu we have established the default expiration time of the customers´ cards.

The default *Activation Date and Time* is the moment when the customer checks in. We can modify it manually. Remember that we have created that default date in the General label of the Setup menu. The activation date is the date in which the card we have recorded will start to operate in the system. Obviously, the expiration date must come after the activation date. As already mentioned, we must do this manually.

In our example, the number of nights will be 1 and the activation time, the date and time in which the customer checks in.

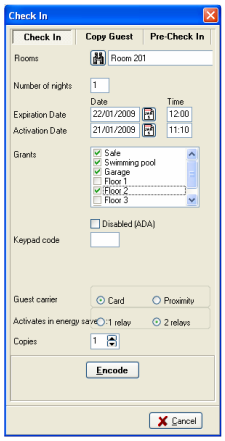
In the field Grant, we see the grants available for the guest in room 201. In this case, the guest will have access to the safe, swimming pool, garage and floor 2 of the hotel.



In the programming of common access doors, the customer in room 201 is allowed to access by default. However, now we will definitely decide whether that customer has access to those doors. If we do not want her/him to have access, we will not select the grant, and if we do want her/him to have access we will select it, as shown in the screen.

If we activate option ADA, we will duplicate the opening time of the door for this guest. This option is not available with electronic cylinders.

In the field *Keyboard Code* we must enter the PIN that the customer will use in those access doors where the lock has a keyboard and is operating in the Card + Keyboard mode. The customer will insert the card and then enter the PIN to open that door. If the hotel does not have any lock with a keyboard operating in the Card + Keyboard mode, we can eliminate that field.

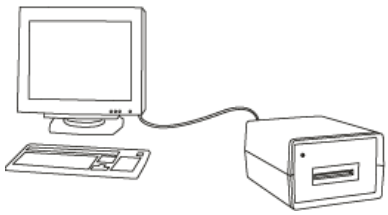


In the field *Guest carrier*, we have the option to choose between card and proximity when we have a dual lock. By default, this option is activated in the option we have previously selected in the door menu –See 5.5.3-.

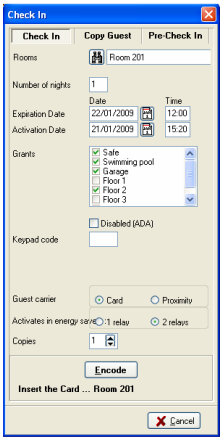
If we have added energy savers to the installation, when recording a card we will have the possibility to select one relay (it activates the first relay) or two relays (it activates both relays). See the following screen:

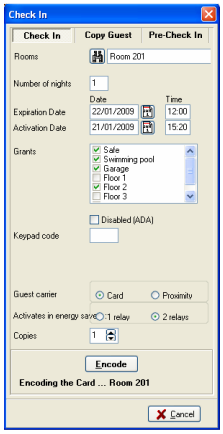
Finally, in the field *Copies* we will enter the number of cards we want to record, which will be the same as the number of people who will use the room: 2 for double rooms, 3 for triple rooms, etc.

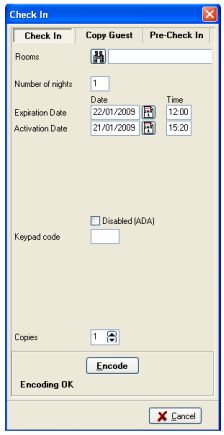
Once we have defined all the fields in the screen, we can record the card for the new customer. The card encoder of the INHOVA system must be connected to the computer from which we are checking in.



We click on the Record button and insert the card in the editor, which will record the card. The software will indicate the state of the recording process, as shown in the screens below. The process only takes a few seconds.







If we are going to make 2 or more copies, the program will tell us to enter the second card, then the third and so on, until we finish recording all the copies.

Once we have recorded the card, we can give it to the customer. The customer will have access to her/his room, the places s/he is allowed access and the places for which s/he has a grant.

When the customer checks out, the card will expire at 12H00MN, according to what is established in the program. If by whatever reason the customer leaves the hotel before the arranged date and takes the card with her/him, that card will be automatically cancelled when the new customer inserts her/his card in the lock of the room. In other words, a customer's card automatically cancels the card of the previous customer, if that card has not expired yet.

If we do not have a new customer for that room and we need to cancel the card of a customer who has checked out and taken a card that has not expired with her/him, we can use a special card called *Customer Cancelling Card*. We will see this later in this manual.

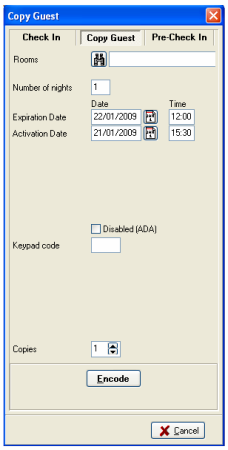
6.2- COPY GUEST

When we check in a new customer, we can make as many copies of that customer's card as we want. The card and the copies will have the same characteristics and functions.

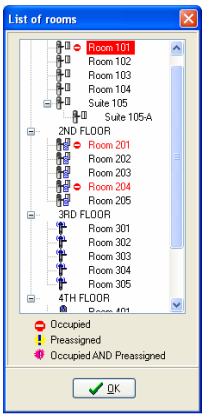
But we may not want all the copies to have the same functions. For instance, we can have a room with a father and a son. The father, who has access to the safe, might not want his son to have access to it. If we make the copy from the check-in screen, both cards will be identical.

To solve this kind of problem we can use the option "Customer's Copy". With this option we can make copies of a customer's card with different functions.

If we click on the icon *Customer's Copy*, we will see a screen that is similar to the check-in screen:

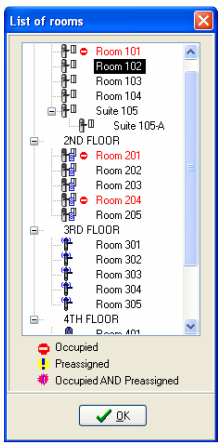


In this screen we must select the number of the room we want to make a copy of the card for. This room must have a customer with a card. That is, it must be a Full room.

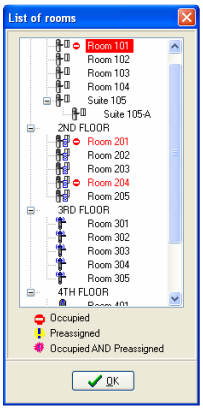


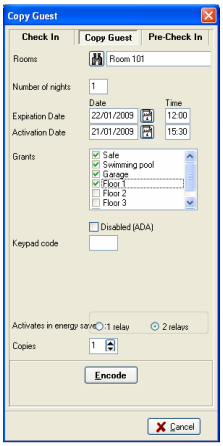
To select a room we click on the Binoculars icon of the *Rooms* field. Then we will see the list of the hotel´s rooms. The full rooms (those that have at least one customer card that has not expired) are shown red, and the available rooms (those that do not have a customer) black.

If we want to make a copy of a customer's card we must select a full room from the list. If we select an available room and click on the OK button, the program will display an Error message, because we are asking the program to make a copy of a card that does not exist:



We select a full room (for example room 101) and click on the OK button. We will return to the previous screen where room 101 is selected, and we will see the characteristics of the card recorded during the check-in.

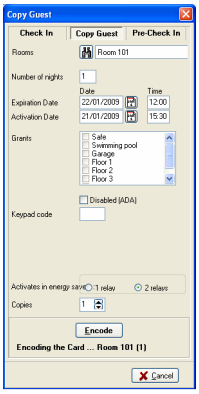


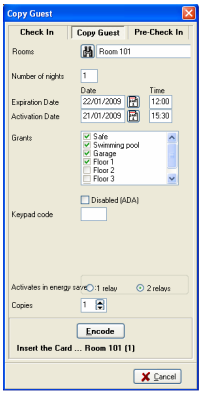


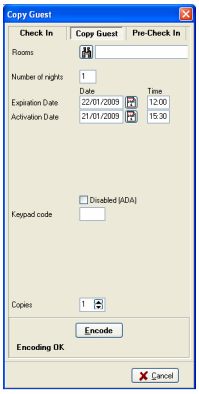
In this screen we will see that the "original" card has all the grants. Therefore, before we copy this card, we must delete the grant for the Safe. We can actually modify any parameter of the screen: the number of nights (the second person in the room might stay longer at the hotel), the grants, the keyboard code, etc.

We can make as many copies as we want.

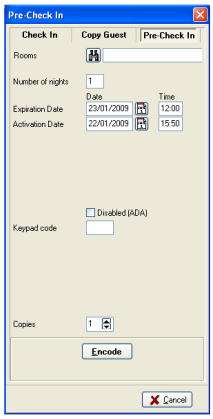
Once we have made the necessary changes, we click on the OK button and record the card as usual:







As mentioned earlier, the editor must be connected to the computer and switched on.



6.3- PRE-CHECK IN

This option will allow us to assign rooms to customers that are going to come to the hotel in the next hours or days, even if the rooms are occupied in that moment. So to speak, we will do the check-in as it is described in the chapter 6.1., filling out all the necessary fields. We need to define also the date and time when the card will be activated.

This option will help a lot to the receptionist when big groups come to the hotel, in

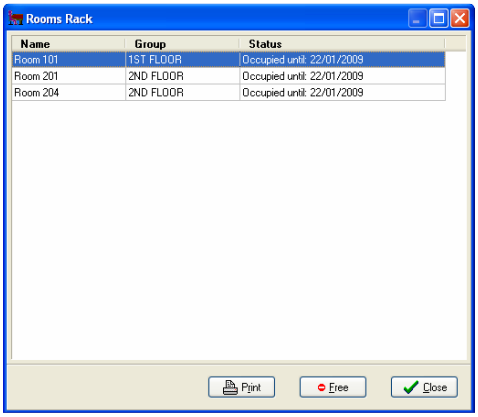
the case the customers send in advance the check-in information.

6.4- CHECK OUT

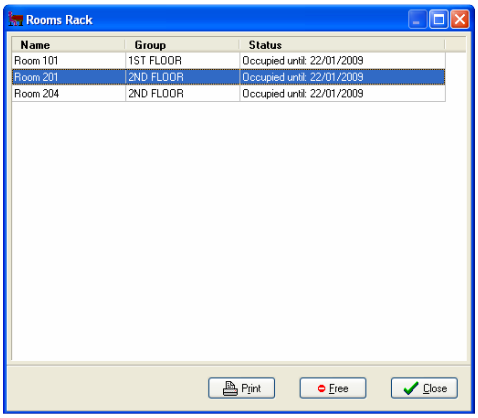
A room will be "officially" full until the expiration date established during the check in arrives. We will not be able to do another check-in in that room while it is full. That is, the room will not be available. The room will be available again when the expiration date arrives and the room is automatically checked out.

If for whatever reason a customer leaves the hotel before the established expiration date and we want to give that room to another customer, we will have to do the check-out manually.

To check the room out manually we click on the *Check Out* icon of the main screen of INHOVA. We will see the following screen:

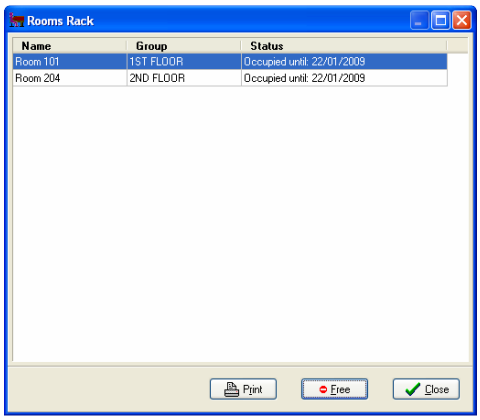


This screen shows a list of the rooms that are full at that moment. To check out one room in particular, for example room 201, we must select that room:



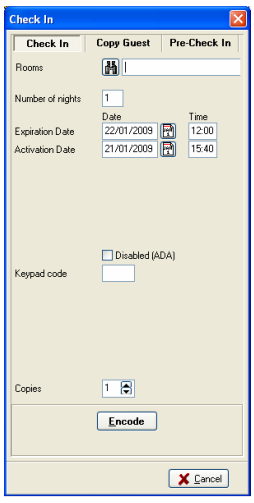
Once we have selected the room, we click on the *Check Out* button. The program will check out the room and that room will be available again. Before we check the room out the program will ask us to confirm that we want to do this:

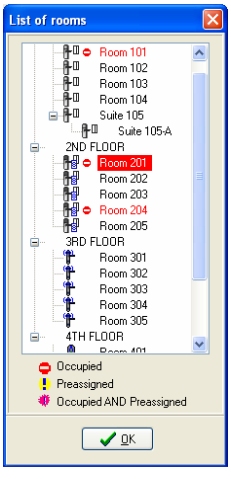
This room will disappear from the list of full rooms:



We can also do this in the Check-in screen.

Let us suppose that we are checking in a new customer and we want to give her/him room 102, which is available but appears full in the system. In the check-in screen we will click on the Room field to see the list of rooms:





Then we will select that room, even if it is shown red (this indicates that it is not available), and click on the OK button.

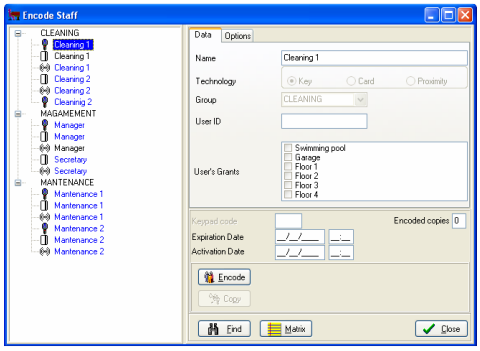
The program will tell us that that room is full, and will ask us to confirm that we want to do the checkout.

We click on the YES button. Automatically the program will check the room out and will select it to check in the customer in that room. Then we will follow the check-in process explained in the previous section.

6.5- MASTER CARDS

In the previous sections we have explained how to record customers´ (guests´) cards and how to make copies of these cards. We will now see how to record the cards for the hotel staff.

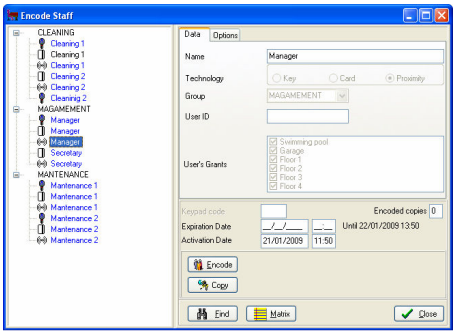
If we click on the icon *Record Master Cards* of the main screen of the INHOVA program, we will see the screen to record the staff ´s cards:



In this screen we will see the list of all the hotel staff, divided into groups as established in the INHOVADATA program.

The list will show the names of the staff cards that our level of access to the software allows us to record. Remember that each operator has a certain level of access to the software, and that each staff card requires a minimum level to be recorded.

If we select the name of the person we want to record the card for, we will see her/his characteristics and functions. Let us, for instance, select the manager's card.



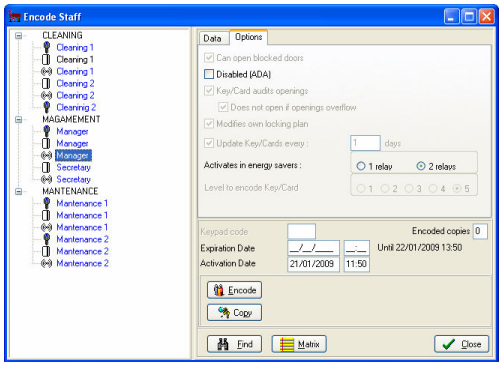
In this screen, however, we cannot modify any of the functions of the manager. We have to do this with the INHOVA program.

The field *User ID* allows saving any type of information related to the user we want to record on the system.

The field *Encoded copies* will indicate us the number of copies of this user we have encoded. For the moment we have not encoded any card, so the number of encoded copies is 0.

The only thing we can specify in this screen is the personal keyboard code for the card we are going to record and the activation and expiration dates-

We selecting menu Options, this screen will appear:

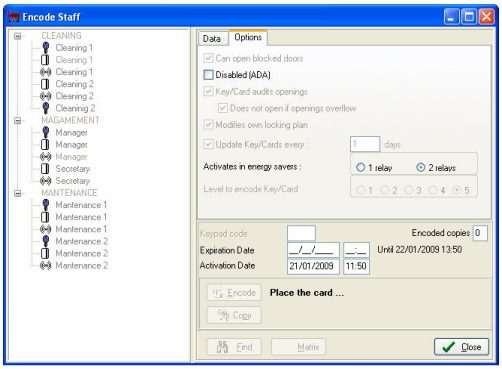


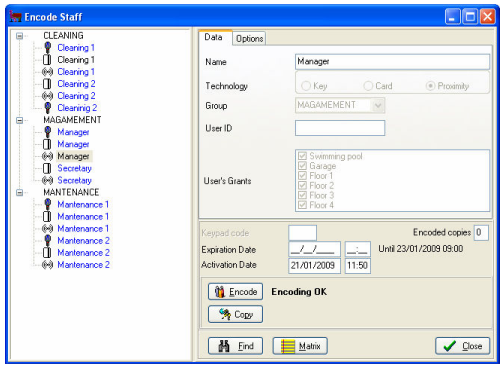
This menu allows visualizing active functions of the users that are already defined in the *Master* menu– See 5.5.4-.

If we leave the fields of the activation and expiration dates blank, the card will start operating in the system at the moment it is recorded, and will not have an expiration date.

If we modify the fields Keyboard, Expiration Date or Activation Date and click on the Record button before the card is recorded, the program will ask us whether we want to save the changes made in the user's record. We must click on the YES button.

If we do not modify any of these three fields, when we click on the Record button the recording process will start automatically:





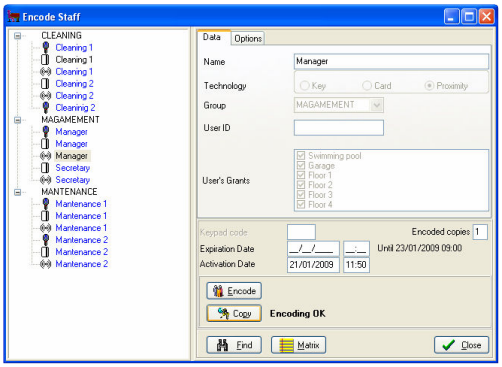
Once we have recorded the card, the name of that card's user will turn black. If the name is shown blue in the user list, it means that the card of that user has not been recorded; if the name is shown black, it means that the card has been recorded. With this function we can see whether we have to record a user card again when we modify that user's record. If we modify the record and we have to record the card again, that user's name will turn blue again.

In addition, once the card is recorded, the *Copy* button of the screen *Copy Master Cards* is activated. This allows us to make copies of that card. The field *Copies Recorded* will show us the number of copies that have been recorded for a user.

A new card automatically cancels the locks of the previous card. A copy of a card does not do this, because it is identical to the original card.

With the INHOVA system, if a user has lost a card we can record a new one. The locks, readers and/or safes will recognise the new user card when s/he inserts it in the lock, and cancels the previous card.

To make a copy of the manager's card (the *Copy* button in the manager's record is activated, as we have just recorded her/his card), we must click on the *Copy* button. The copying process will start automatically, and we will see the following screen:

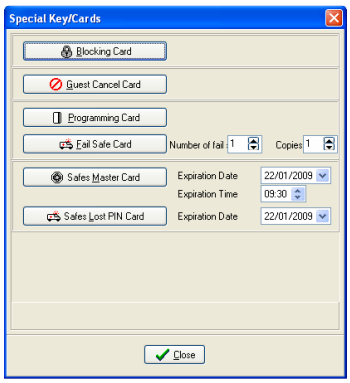


In this screen we can see that the field *Copies Recorded* shows 1 instead of 0.

In case we use proximity technology with Read and Write feature (UoC), if we click *matrix* button we could know the state of the information about the selected user recorded in the matrix.

6.6- OTHER CARDS

The INHOVA system includes a series of cards with special functions. In this section we will explain how to record and use them. By clicking on the button *Other Cards* of the main screen of the INHOVA program, we will see the following screen:

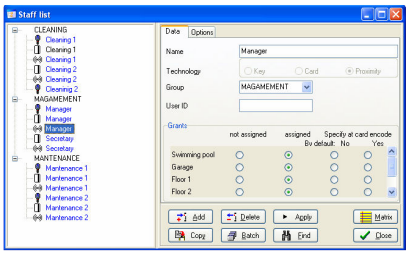


This screen shows all the special cards of the INHOVA system: the Locking Card, the High Transit Cancelling Card, the Customer Cancelling Card, the Programming and Emergency Cards and the cards concerning the safes in the hotel: the Safe Master Card and the Card for the Loss of the Safe PIN.

Blocking Card

When we insert the locking card in a lock, the lock gets "blocked" and does not allow access to anybody, regardless of whether the user who wants to open the door is allowed to access in the hotel's closing plan or not. Only the users who have the option "Can open blocked doors" will be able to open the door.

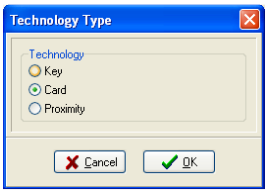
In the case of the staff, the option *Can open blocked doors* is in the user record and is created in the INHOVADATA program.



By default, the hotel's customers can never open blocked doors.

To "unblock" a door, we must insert and remove the blocking card we have used to lock it. When we unlock it, the lock will return to its previous state, allowing access to those users who have access according to the closing plan.

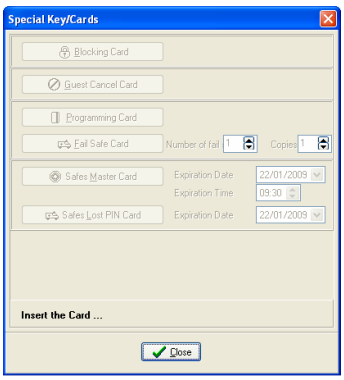
To record the locking card we must click on the button *Blocking Card* of the Other Cards screen.

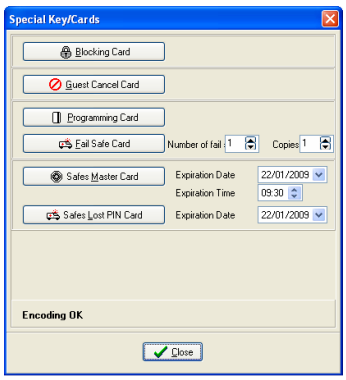


The program will ask us to choose the type of technology of the Blocking card. In this case, we will choose the card option.

The program will ask us whether we want to record a new blocking card or we prefer to record a copy of an existing locking card. The new card will cancel the previous one, but the copy will not.

After selecting the desired option, we click on the OK button. The recording process will then start.





The blocking card is very useful for hotels. For instance, we might want to block the door of a customer's room without cancelling her/his card. We can also use it when we are refurbishing a hall or a room and the management does not want anybody to have access to it, etc.

Guest Cancel Card

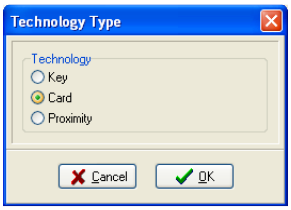
The guest cancel card is used to cancel guest cards that are active in the system. To cancel an active guest card of any room, we must insert the guest cancel card in the lock of that room. The customer card remains activated until that moment, as it will be automatically cancelled. We can use this card when a guest leaves the hotel earlier than expected and we do not have a new guest for that room.

When a guest checks in at the hotel, s/he chooses a certain number of days, and her/his card will not expire until 12:00 of the day the customer is leaving. That is, the card will be active in the system until that date and time.

If for whatever reason that guest leaves the hotel earlier than expected and does not hand over in her/his card, that card will remain active until a new guest checks in the same room or until the card expires. Remember that the guest card of a room is cancelled automatically when we enter a new customer card in the lock of the same room. This means that every time we check in a room we record a customer card for that room. When that card is inserted in the lock of the room, the lock automatically cancels the card of the previous guest.

If we do not have another guest, we do not need to record a new guest card for that room. Therefore, the card of the guest who has left the hotel earlier than expected will remain active until it expires.

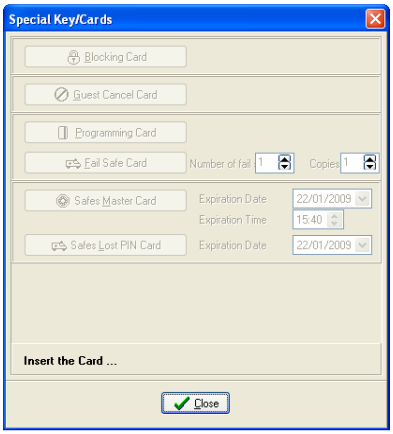
To prevent the customer from having access to the room where s/he stayed, we can use the guest cancel card.

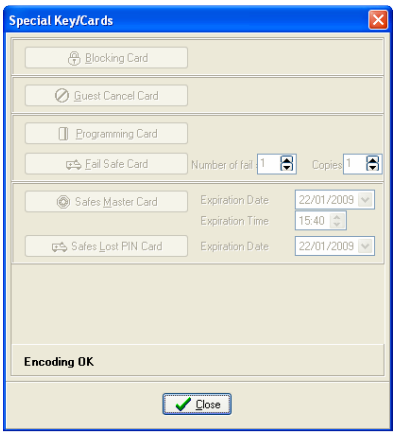


To record this card we must click on the button *Guest Cancel Card*. The program will ask us to choose the *type of technology* of the Guest Cancel Card. In this case, we will choose the card option.

The program will ask us whether we want to make a new card or a copy. As we already know, the new card will cancel the previous one, and the copy will not.

We select one of the options and click on the OK button. The recording process will then start:





Programming Card and Fail safe Card

The programming card and the Fail safe card are used when a fault in the system prevents us from using the INHOVA program.

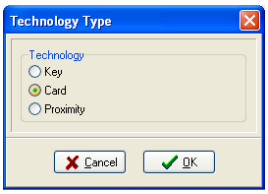
If for whatever reason we cannot execute the INHOVA program or the motorized encoder does not work and we cannot check in the customers, we can use the programming card and the Fail safe card to do the check-in. The process is as follows:

The hotel's reception will always have a programming card and at least as many *Fail safe cards* as rooms are in the hotel. When the system breaks down and we want to check in a customer in a room, we will insert the programming card in the lock of the room, and then a Fail safe card. From that moment the Fail safe card will become the card of that room. With this method we will only have one card for each room.

When the customer leaves the hotel, s/he will hand over the card at reception. This card will then be given to the next customer in that room.

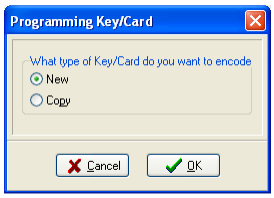
If the customer leaves the hotel without handing over the card, we will repeat the operation and record a new Fail safe card. That is, we will insert the programming card in the lock and then a new Fail safe card. That card will become the new card of that room and the previous card will be cancelled.

When the system works again, we will check in as usual. When the new customer card (this time recorded with the motorized encoder) is inserted in the lock of the room, the Fail safe card used until then will be cancelled.

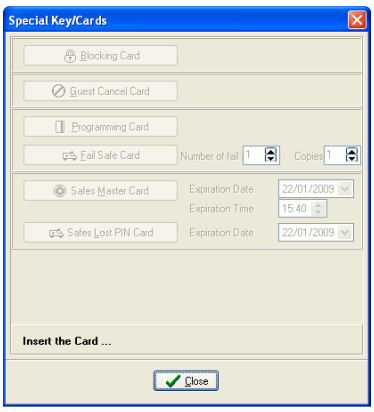


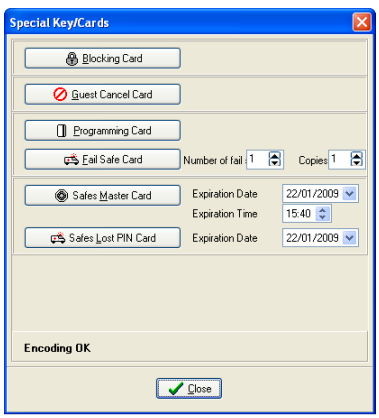
To record this card we must click on the button *Programming Card*. The program will ask us to choose the type of technology of the Programming Card. In this case, we will choose the card option

The recording process of the programming card is very simple. If we click on the button *Programming Card*, the program will ask us whether we want to record a new programming card or make a copy of the existing one (if there is one). The new card will cancel the previous one and the copy will not.



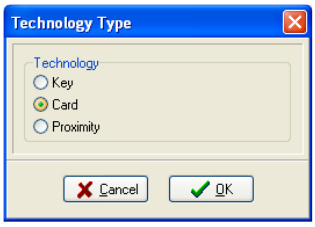
We select the option we want and click on the OK button. The recording process will then start:



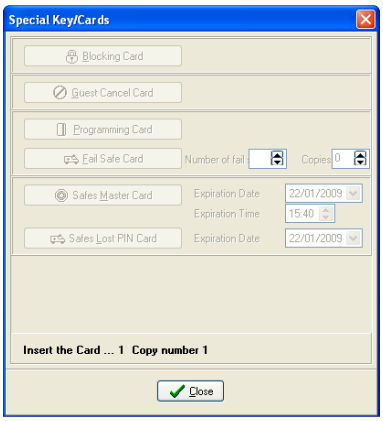


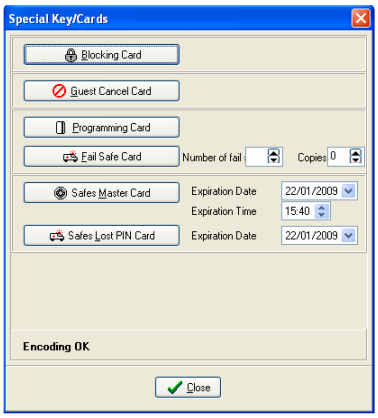
To record fail safe cards we have to set first the Number of fail safe Cards we need. In this way, all the cards will be recorded consecutively.

Once we have set the number, click on *Fail Safe Cards*. The systems will ask us about the *Technology Type* we want to record the fail safe cards with. In this case we have to select option Card, but it is possible also to select proximity technology.



The recording process will start:





Safe Master Card

When a customer who has had access to the safe in her/his room leaves the hotel, s/he must leave the safe open so that the next customer can use it.

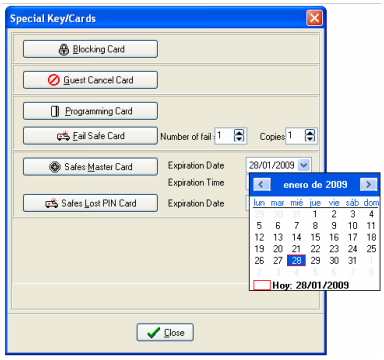
If s/he leaves it closed, the next customer will not be able to use it and s/he will have to call reception for an emergency opening of the safe.

The safe master card is used for that purpose. This card opens ALL the safes in the hotel. Because of this, this card must be kept in extremely safe conditions and very few people should be allowed to record it.

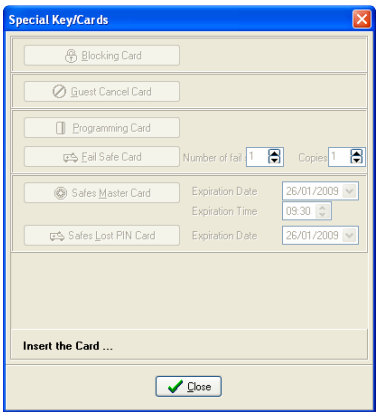
Since it is a “high risk” card, when we record it we select an imminent expiration date, for instance the next day. This means that every time we need to use it we will have to record it again. Only authorised users will be able to do this.

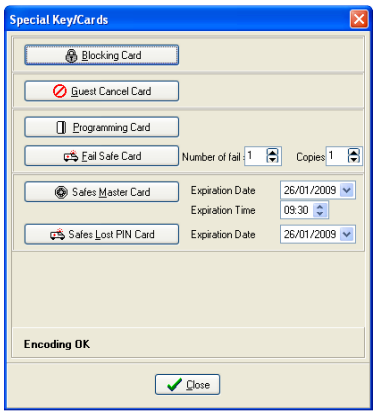
To record the safe master card we must first determine the expiration date. By default the expiration date is 24H00MN of the day in which the card is recorded.

To select the day we click on the arrow of the field *Expiration Date*:



Once we have selected the day and the time we click on the button Safe Master Card. The card will then be recorded:





Safes Lost PIN Card

A customer may forget the code s/he chose when programming the safe. A special card is also used to solve this problem.

Let us remember how safes work when they are operating in the Card + Keyboard mode: when the customer wants to use the safe in her/his room s/he inserts her/his customer card; then s/he enters a 4-digit PIN that s/he has chosen and presses the green key. The customer enters the PIN again to confirm the operation and then presses the key again. If the operation has been performed successfully, the safe will close when pressing the green key that second time. From that moment the customer will have to key in the PIN and press the green key to open or close the safe. When s/he leaves the hotel, s/he will leave the safe open. When the new customer arrives, s/he will repeat the process with a different PIN of her/his choice.

With this operating mode, only the customer knows the PIN to open or close the safe.

If the customer does not remember that PIN, we will have to do an emergency opening of the safe. The INHOVA program has a special card called Safes Lost PIN.

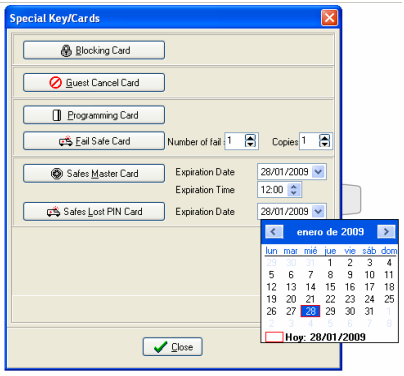
The customer will call reception to explain the problem. At reception they will record a Safes Lost PIN card, and the receptionist will go to the customer's room.

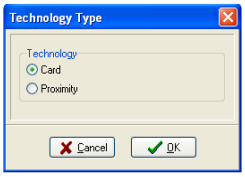
The safe will be opened by combining the Safes Lost PIN card and the customer's card. The receptionist will insert the Safes Lost PIN card; after that the customer will insert her/his card, and the safe will open when this happens.

It is, then, an extreme security measure both for the customer (the customer will see that nobody can open the safe if s/he is not present) and the hotel.

The Safes Lost PIN Card is, like the safe master card, a high security card. Therefore, very few people must have access to it and it must expire very quickly.

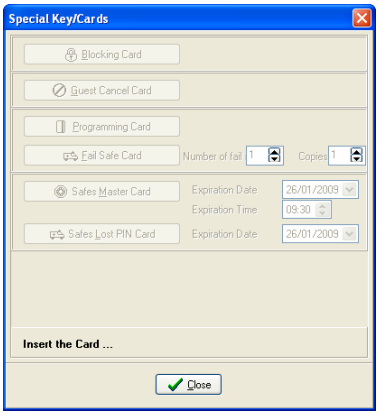
As in the case of the safe master card, before we record the card we must select its expiration date, which is by default 24H00MN of the day in which it is recorded.

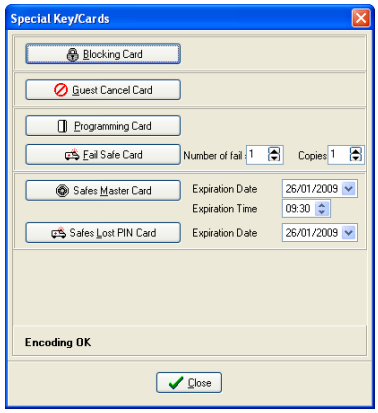




Once we have selected the day, the program will ask us whether we want to make a new card or copy of the existing one:

After selecting the desired option, we click on the button *Safes Lost PIN Card*. The card will then be recorded:

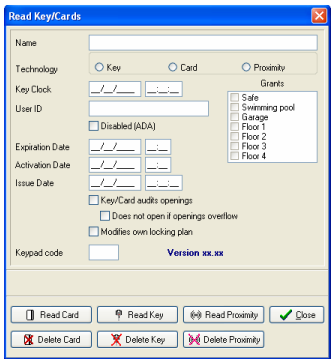




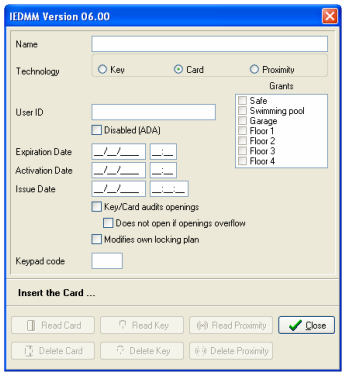
6.7- READ CARDS

Another feature of the INHOVA program is the possibility of reading the cards that have been recorded. If a user loses her/his card and we find it, we need to read the information stored in it to be able to identify it.

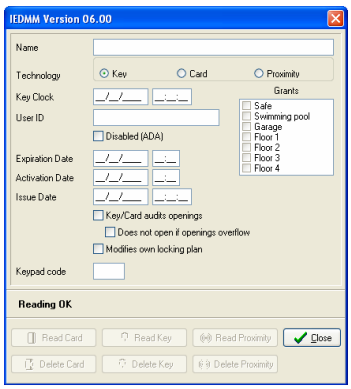
To read the card we click on the icon *Read Cards* of the main screen of the INHOVA program. The system will ask us to insert the card in the motor-driven editor:



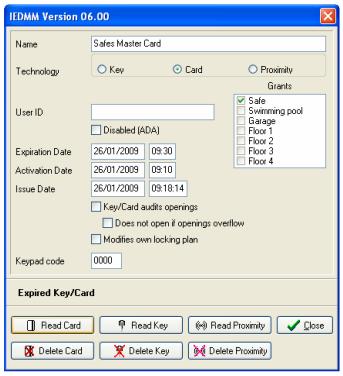
In case we want to read a magnetic stripe card we will click in the *Read Card* button and the motorised encoder will ask for a card:



We will insert the card in the editor. Then the screen will show the record of the user the card belongs or belonged to. We will also see a message showing the state of the card, if the card is not active in the system. If we do not see this message, this means that the card is still active in the system, like the card of customer 101 below:



If we see a message it means that the card is not active. The message will also show why the card is not active: the card has expired; the card is old, etc.

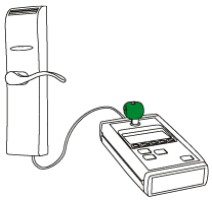


If we want to read another card we must click on the button *Read Card* of this screen.

6.8- OPENINGS

We know that the locks, readers and/or safes can store the last 600 or 1,000 events in their memory. An event is the insertion of any card in a lock or reader. When the lock's memory reaches its limit, the last event will delete the first one and so on.

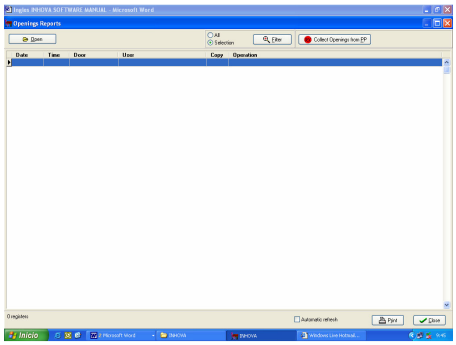
To see these events or openings in the locks, readers and/or safes, we must go to the doors with the portable programmer and pick up these openings. See the MANUAL OF THE PORTABLE PROGRAMMER



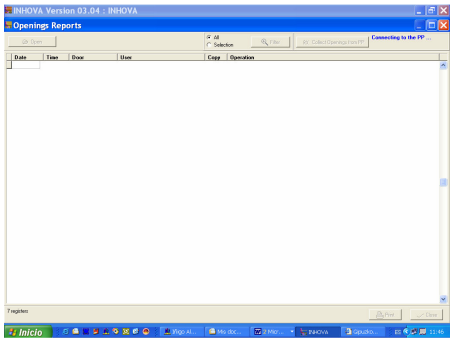
Once we have the openings in the portable programmer, we can download them to the computer and see them in the screen in chronological order, create filters and print the register of openings.

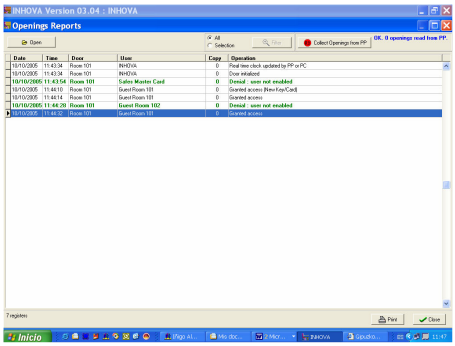
The first step is to connect the portable programmer to the computer once we have picked up the openings.

If we click on the *Openings* icon of the main screen of the software, we will see the following screen:



In this screen, with the portable programmer connected to the computer and switched on, we click on the button *Pick Up Openings of the PP*. The INHOVA program will automatically pick up all the events stored in the portable programmer:





All the events will be sorted in chronological order. In this register we will see the following information:

Date: the date in which the event took place

Time: the time in which the event took place, in hours, minutes and seconds

Door: the door in which the event took place

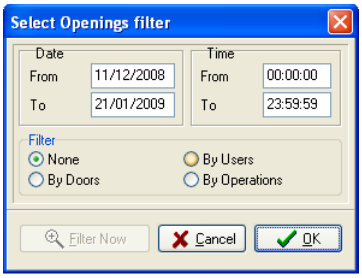
User: which user performed the event

Copy: the number of the copy of the user card, if the card is a copy. If 0 is displayed, this means that it is the original card

Operation: what the event consists in. That is, whether it is an authorised opening or whether the access has been denied. It will not show the reason why access has been denied.

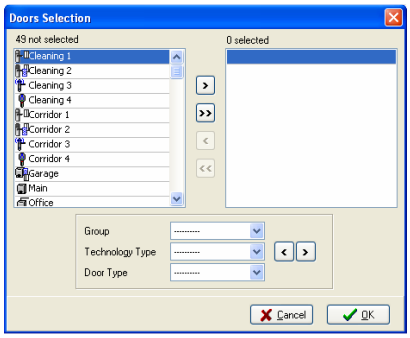
Once we have seen the register of events that we have picked up from the locks with the portable programmer, we can create filters to search a specific type of information.

If we click on the Filter button of the openings screen, we will see the following dialog box:

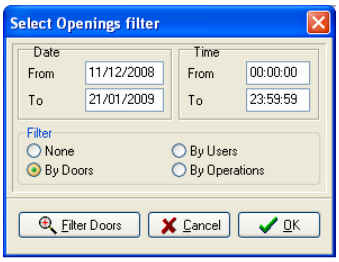


In this screen we can select a specific period of time to see its register of events, as well as filter the information by door, user and operation.

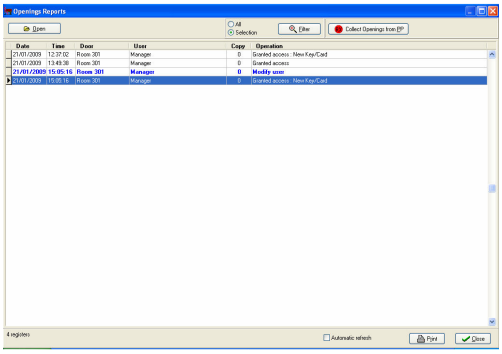
For example, if we want to see the register of events of a particular door, we must select the option *By Doors*. Then we will see the following screen:



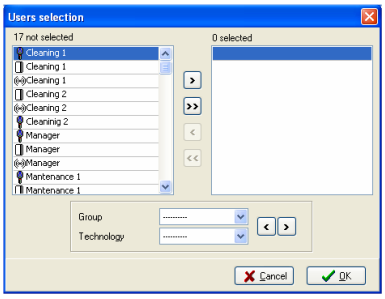
In this screen we must select the door or doors whose register of events we want to see. For instance, we select door of Room 101 and click on the OK button:



When we click on the OK button we return to the previous screen, but with the selection made, and click on the OK button again. We will now see the register of events of the door or doors selected:

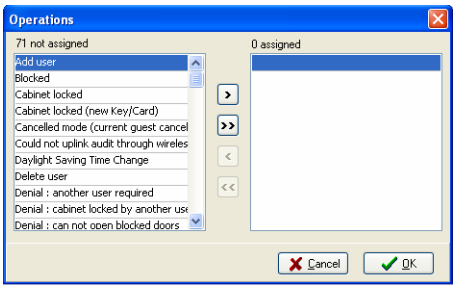


We can also filter the information by users; with this we will see the doors a particular user has opened or has tried to open. In the screen to choose the filter, we select the option *By User*. We will see a screen like the following:



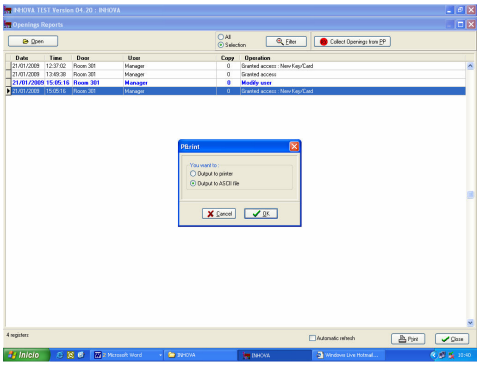
In this screen we select the user or users whose register or events we want to see, and follow the same procedure as with the Doors filter.

We can filter the information by events. To do this we select the option By Operations in the filter screen.

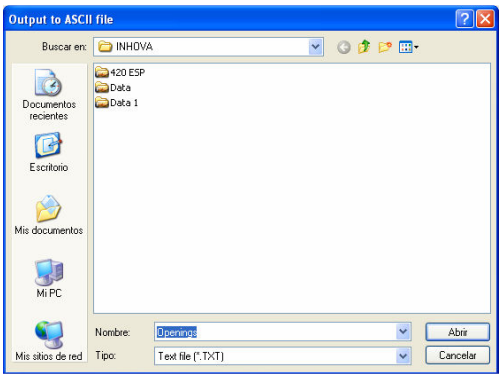


We can also print the register of events. There are two ways of doing this: print it in the default printer of the computer where we are executing the program or save it in a text file.

If we click on the Print button we will see the following screen:



In this screen we select Copy to ASCII file and click on the OK button. This will open a screen where we can select the location where we want to save this file. The default file is called Openings.txt, but this name can be modified.



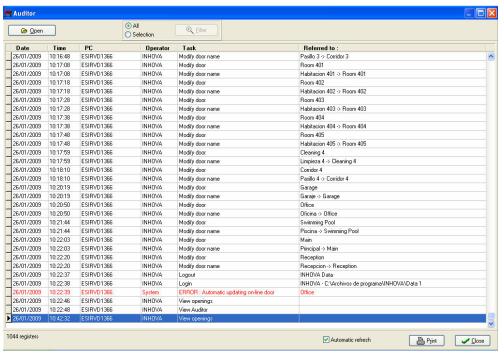
If we choose to print the register, it will be printed in the default printer of the computer.

6.9- AUDITOR

Like the INHOVADATA program, the auditor is a file that stores all the operations performed by the operators in the INHOVA program.

In the auditor we can see these operations. In addition, we can use filters to obtain the information we want more easily. We can filter the information by operator, by operations and by safes.

If we click on the Auditor icon of the main screen of the INHOVA program we will see the following screen:



This screen shows all the operations performed by the operators of the system in chronological order. We will see the following information:

Date: the date in which the operation was performed

Time: the time in which the operation was performed

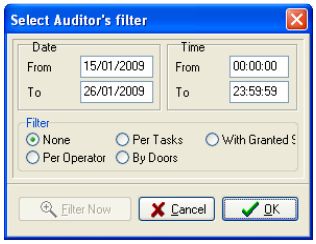
PC: the computer in which the operation was performed. We know that INHOVA can be used by a computer network. This field shows us the name of the computer in the network from which the operation was performed

Operator: the name of the operator that has performed the operation

Task: the operation performed

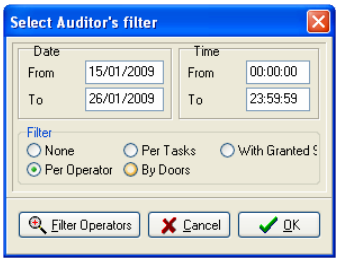
Referring to: the door or user affected by the operation performed. For instance, if the operation performed by the operator is a check-in, the field *Concerning* will show the number of the room of the customer checking in.

As in the case of the register of openings, we can also filter all this information. If we click on the Filters button we will see the following screen:

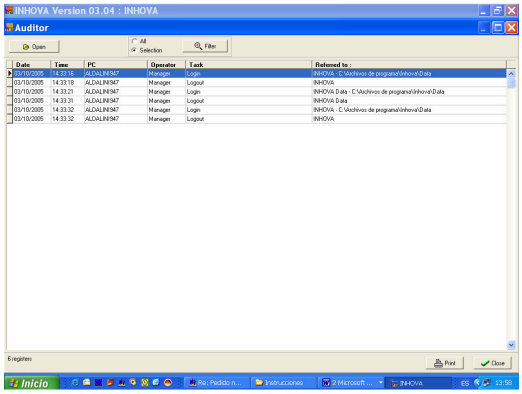


In this screen we can select a specific period of time to see all the operations performed, or choose how we want to filter the information: By Operator, By Operations or by Safes.

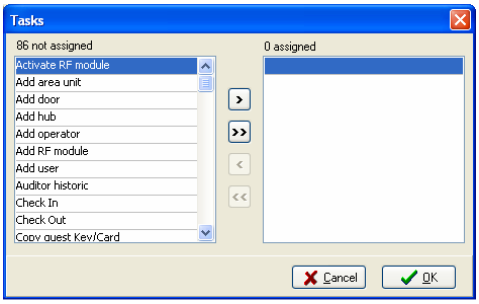
If we select the option *By Operator*, we will see a screen with the list of all the operators registered in the system. To select one of these operators we must double click on it.



Then we will return to the previous screen. We must click on the OK button to see the operations performed by this operator:

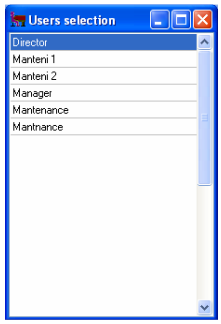


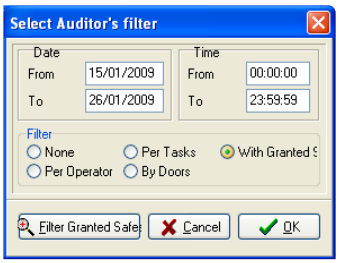
If we select the option *Per Tasks* in the filters screen, we will see a screen with all the operations that an operator can perform with the INHOVA system. In this screen we will select the tasks we want to see, who performed them and when.



Another filter we can use is that of the safes. Thus we will see what operations each operator has performed in the safes and when. This is very useful to know which operators have recorded master cards of safes, for instance.

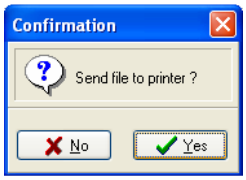
If we select the option With Granted Safes in the filters screen, we will see a screen with a list of all the operators of the system.





To select one operator we must double click on the operator name. We will then return to the filters screen, where we must click on the OK button to see this filter.

We can print the auditor whenever we want. To do this we must click on the Print button of the display screen of the auditor. The program will ask us whether we want to send the file to the printer, which is the default printer of the computer where we are executing the operation.



6.10- DATA

In the INHOVA system, some operators will be able to change the closing plan of the hotel. The operators´ ability to modify the closing plan depends on the level of access that they have.

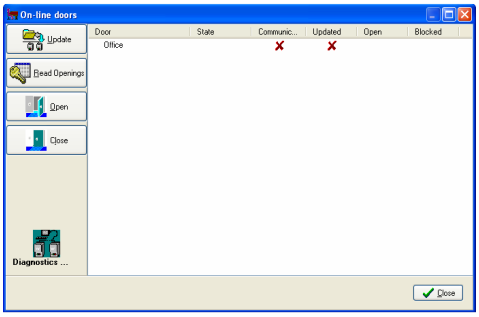
When executing the INHOVA program, the operator who has authorisation to change the closing plan of the system will see the DATA icon. This icon is a direct access to the INHOVADATA program, where the operator will make the necessary changes.

Therefore, if we click on the Data icon of the main screen of the INHOVA system, we will access the INHOVADATA program:

If we want to return to the INHOVA program once we are in the INHOVADATA program, we only have to click on the Exit icon of the INHOVADATA program.

6.11- ON-LINE DOORS

In case that in the closing plan there are on-line wall readers, we will configure the system in order to use the on-line system in the System Setup menu (see chapter 5.5.2.) and we will create the on-line doors in the Doors menu (see chapter 5.5.3.). If we click on the on-line Doors button in the main menu INHOVA, we will see the following screen:



We will have the following options:

Update: select one wall reader in the on-line doors list and click on the update button. The selected wall reader will be updated with the last closing plan.

Read Openings: select one wall reader in the on-line doors list and click on the read openings button. The system will pickup all the opening records of the selected wall reader.

Open: select on wall reader in the on-line doors list and click on the open button. The selected wall reader will be opened.

Close: select on wall reader in the on-line doors list and click on the close button. The selected wall reader will be closed.

Besides, in the same screen the system will show us the situation of the on-line doors:

Door: a list of the on-line doors.

State: the type of state, see chapter 5.5.3

Communicates: it will inform us about any communication between the wall reader and computer.

Update: it will inform us if the on-line doors are updated with the last closing plan.

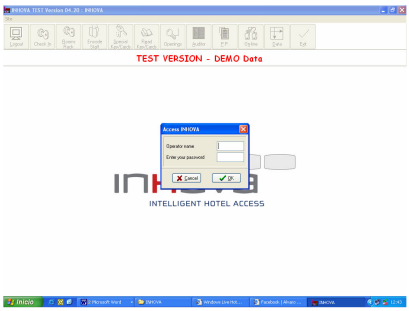
Open: it will inform us if the on-line doors are opened or closed.

Blocked: it will inform us if the on-line doors are blocked.

6.12- LOGIN / LOGOUT

Logout is a function used by operators to finish a session in the INHOVA program. When an operator has finished performing the necessary operations, instead of closing the program s/he can click on the Logout icon. With this, the program will be locked. When another operator wants to activate the system, s/he will have to enter her/his user name and password.

If an operator clicks on the Logout button, the program will be locked:



To activate the program, the next operator will have to click on the Login button and enter her/his user name and password.

6.13- EXIT

If we click on the Exit icon of the main screen of the INHOVA program, we will close the application. This means that the program will stop being executed in the computer.

7- MOST FREQUENT OPERATIONS

In the previous sections we have explained how to create the closing plan of a hotel and how to manage the system. In the INHOVA access control system we will often have to carry out certain operations, which we will now explain shortly.

7.1- CANCELLING LOST OR STOLEN KEYS

As we have mentioned, INHOVA is a system to manage hotel accesses. This system offers many advantages and features, which have been shown in this manual.

One of the great advantages of the system in comparison to traditional access management systems is that the cards that have been lost or stolen are cancelled very easily.

In any traditional key system, when the key of a room gets lost or when a member of staff loses it we have two options. The first one is to make a copy of the lost or stolen key. This solution, however, does not offer any security, because the lost or stolen key is completely out of control. Somebody could use that key to enter

places of the hotel where access is restricted. The second option would be to change the cylinder of the door and cut a new key. This option can be very expensive, particularly in the case of mechanical devices, as the loss of a key could mean having to change more than one cylinder. This could get even worse if the stolen or lost key is a master card.

The INHOVA system can solve this problem in a very easy, simple and cheap way. It has a card cancelling system (valid for either customer or staff cards): every time we record a new card for a user and the card is inserted in a lock, reader or safe, the lock will recognise that the card is new and cancel the previous one.

For instance, whenever a customer checks in a room, we record a new card for her/him. When the customer goes to that room, s/he inserts the card in the lock. The lock reads the information of the card and immediately recognises that it is a new customer card, cancelling the previous one. Most of the times the previous card will be the card of the previous customer that stayed in that room. The previous card will be cancelled regardless of whether the card has expired or not. The lock will simply cancel it.

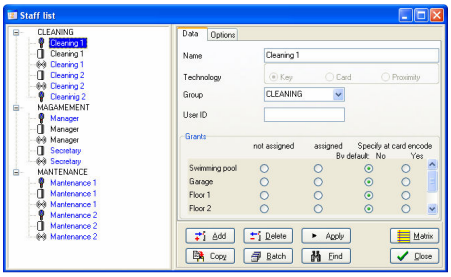
The same happens in all the locks of the hotel. For example, when a new customer goes to the swimming pool because s/he is allowed access, the lock of the swimming pool will recognise that this customer card is a new customer card for a particular room and will cancel the card of the previous customer.

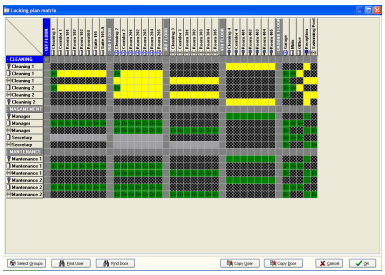
The procedure is similar in the case of the staff cards. If a member of staff loses a card, we will simply record a new card for that user. When the user inserts her/his card in the locks of the hotel, the locks will cancel her/his previous card.

If we have read and write (UoC) system or Update Online wireless system (UoL), we can delete a user from the software. The user will be deleted automatically in the moment he needs to change the card.

7.2- ADDING NEW STAFF

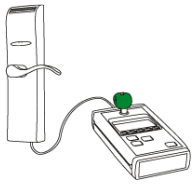
When we have to add new staff to the hotel, we must go to the user's screen of the INHOVADATA program.





Once they have been added, these users will appear in the matrix of the system, and hence we will have to fill in that part of the matrix. That is, we will add horizontal lines to the matrix.

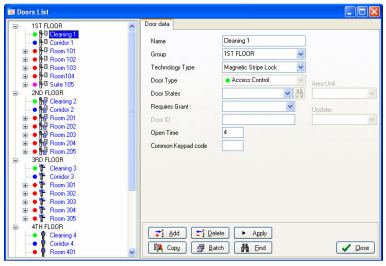
Once we have completed the matrix, we must transmit the new information of the closing plan to the portable programmer. With the portable programmer we will update all the locks of the hotel.



In fact, updating ALL the doors is not necessary. We only have to update the locks affected by the changes in the closing plan; these locks will be the ones to which the new members of staff have access.

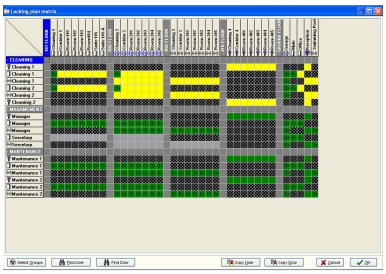
Once the doors are updated, we will record the cards of those new users.

7.3- ADDING A NEW DOOR



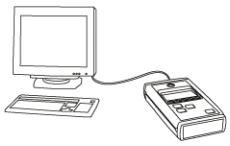
The process is similar.

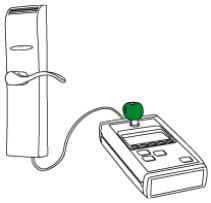
To add a door, we must create it in the doors screen of the INHOVADATA program.



Once we have created the door (and its programming, if it is a common access door), we will fill in the matrix of that door. As we have added a new door to the system, the matrix will show a new vertical line, that of the new door.

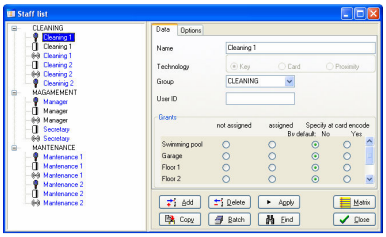
The next step is to transmit the new information to the portable programmer and initialise the new lock with - the portable programmer.





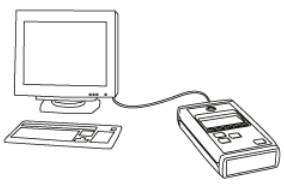
In this case the other doors of the hotel will not be affected, and therefore we will not have to update all the doors of the hotel.

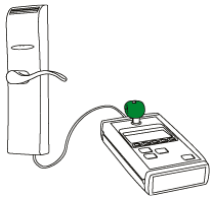
7.4- ELIMINATING AN EXISTING MEMBER OF STAFF



The operation is simple. We only have to eliminate that user from the list of master cards of the INHOVADATA program. That user will then be eliminated from the matrix.

We must transmit the information to the portable programmer and update ALL the locks of the hotel.





We will update the locks according to the importance of the user we cancel. For instance, if we eliminate a user and that user has handed over her/his card, we know that this card will not be used to open any door. Therefore we can leave the updating of the locks for later, when we have to update them for any other reason.

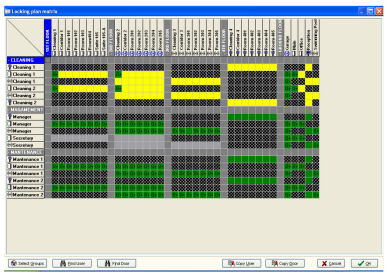
7.5- ELIMINATING AN EXISTING DOOR

When we eliminate a door from the list of the hotel's doors, the door disappears automatically from the matrix. This means that we will get rid of the lock of that door, and hence we will not need to update it.

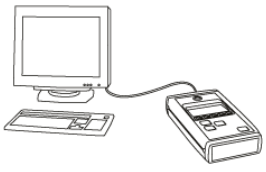
We can use that lock for another door. This is like adding a new door to the system, and the lock will be treated as a brand new lock. That is, we will initialise it again.

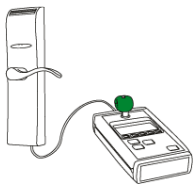
7.6- MODIFYING THE CLOSING PLAN OF A DOOR OR USER

Modifying the closing plan of a door or user involves changing the matrix of the system. Whenever we modify the matrix of the system we must update the affected locks with the new information.



That is, we must transmit the information to the portable programmer and then update the locks.

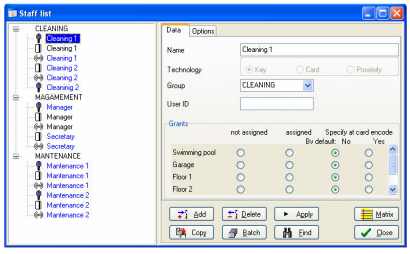




When we modify the closing plan of a user we have to update all the locks where that user is allowed access. When we modify the closing plan of a door we must only update that lock.

7.7- MODIFYING THE DATA OF A USER

Sometimes, when we have to modify a user's record, we will have to record the card for that user again. Changing the name of



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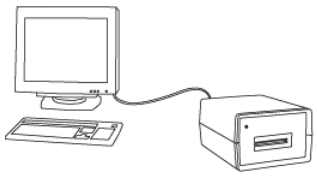
a user does not involve having to record that user's card again, but changing the expiration date of that user does.

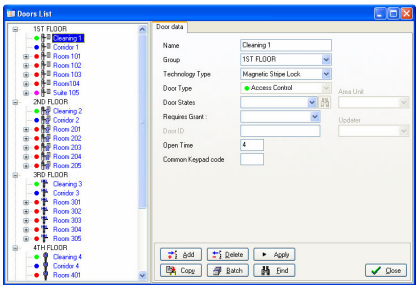
In the INHOVA system it is easy to see when we have to record a user's card again: in the list of the master cards, the user's name is shown blue when we create it. When we record the card, the user's name we have recorded the card for will turn black.



If we modify a user's record and her/his name in the list remains black, we will not have to record the card again.

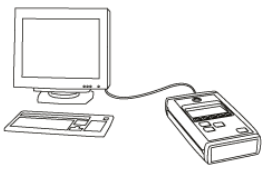
If the name of the user is shown blue after making these changes, we will have to record his/her card again.

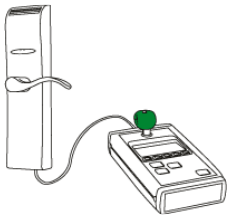
7.8- MODIFYING THE DATA OF A DOOR



If we make any changes in the record of a door of the master cards menu of the INHOVADATA program, we will have to update that door.

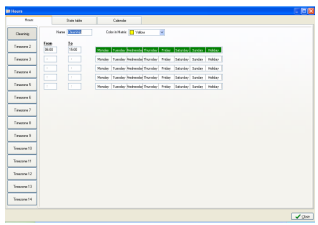
To do this we must transmit the data to the portable programmer. The portable programmer will then update the door.

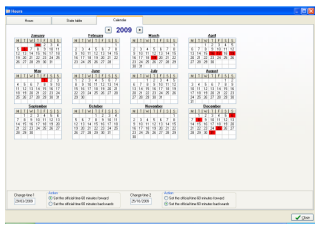


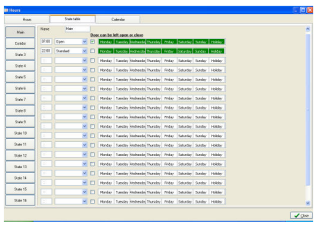
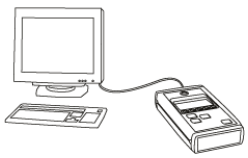
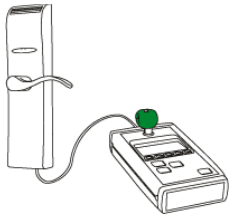


7.9- MODIFYING THE DATA IN THE TIME ZONES, STATE TABLES AND CALENDAR

If we make any changes in the time zones, the state tables and/or the calendar of public holidays of the installation, the locks, readers and/or locks will be immediately updated.





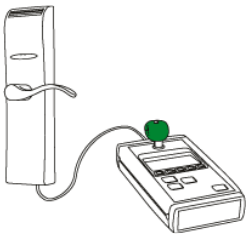
This happens because the locks, readers and/or safes of the system take the date and time of the computer from which we are executing the INHOVA system. Therefore, any change will be communicated immediately.

7.10- OPENING OF A LOCK, A READER AND/OR A SAFE IN AN EMERGENCY

To be able to open any lock, reader or safe in an emergency, the closing plan of the system must be loaded in the portable programmer.

That is, the portable programmer must have the system code of the installation to which the locks we want to open in an emergency belong .

Once the closing plan is loaded in the portable programmer and the authorisation key of the system is inserted in the portable programmer, we can open all the locks, readers and /or safes of the INHOVA system in an emergency.



The emergency openings carried out with the portable programmer are shown in the register of events of the locks, readers and/or safes. Therefore, we will always know when the emergency opening was carried out. We will not be able to see who carried out that emergency opening.; but this information can be obtained by looking at who has used the portable programmer, or who has sent the data from the computer to the programmer.

8- MAINTENANCE

The locks, readers and/or safes of the INHOVA system are easy to maintain. We only need to check the state of the batteries from time to time. These batteries can last for over three years, depending on their use. Another point to bear in mind is the calendar of public holidays, if the hotel has any. In addition, the portable programmer includes a program that checks the operation of the locks.

8.1- CALENDAR

The locks, readers and/or safes of the system have a real-time clock and calendar. They take the date and time from the computer, by means of the portable programmer. This means that their date and time is the same as that of the computer where we are executing the INHOVA program.

The clock of the locks can recognise al the days of the week, from Monday to Sunday. It cannot, however, recognise when a day is a public holiday in the installation. To solve this problem the INHOVADATA program includes a calendar of public holidays. When the calendar is created, it is transmitted to the locks. We can create calendars for several years.

Unfortunately, the memory of the locks can only store 365 days of the calendar. In other words, one year. The first day of that year is the day in which the lock is initialised or updated. Consequently, whenever the lock is updated a new year of 365 days will start.

For instance, if we update the lock on 23rd June, we will transmit a calendar that starts on 23rd June and finishes on 22nd June of the following year. If we update the lock on 1st September (by whatever reason), we will transmit a calendar that starts on 1st September and finishes on 31st August of the following year, and so on.

For the locks, readers and/or safes to have updated information of the calendar, in the INHOVADATA program we will have to create the calendar of at least the next 365 days from the day in which we will update the lock.

8.2- BATTERY CHANGE

The locks indicate that their battery level is low by means of their warning LEDs. When a user inserts her/his card to open a door, the green LED will flicker to indicate that access has been allowed. If the battery level is low, the red LED will flicker too, telling us that we must change the batteries immediately.

If the users do not take any notice of the flickering of the red LED, the batteries will run down and the lock will be locked.

As a result of this, the clock of the lock will stop. When we replace the batteries and the lock is fed again, we will have to set this clock. To do this we must update the lock with the portable programmer. For more information on the battery change see the LOCK MANUAL.

8.3- TEST OF THE LOCKS, WALL READERS AND/OR SAFES

The portable programmer includes a program that checks the locks, reader and/or safes. With this program we can see whether the elements of the system, such as the magnetic stripe card reader, the electronic privacy, the keyboard (if there is one) or the warning LEDs, are working properly.

For more information about the Test see the MANUAL OF THE PORTABLE PROGRAMMER.

9- LICENCE

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